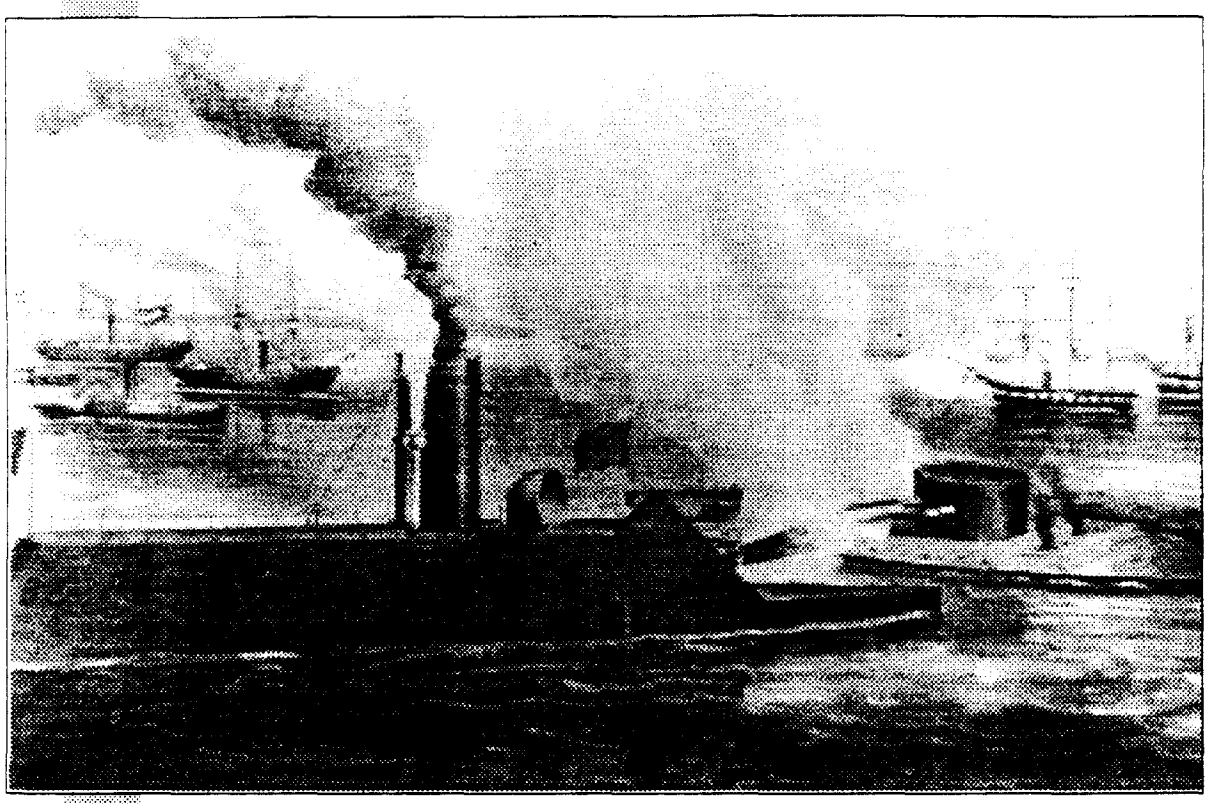
The MONITOR National Marine Sanctuary

Draft Revised Management Plan



U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MAY 1992

The MONITOR National Marine Sanctuary

Draft Revised Management Plan

Sanctuaries and Reserves Division
Office of Ocean and Coastal Resource Management
National Ocean Service
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

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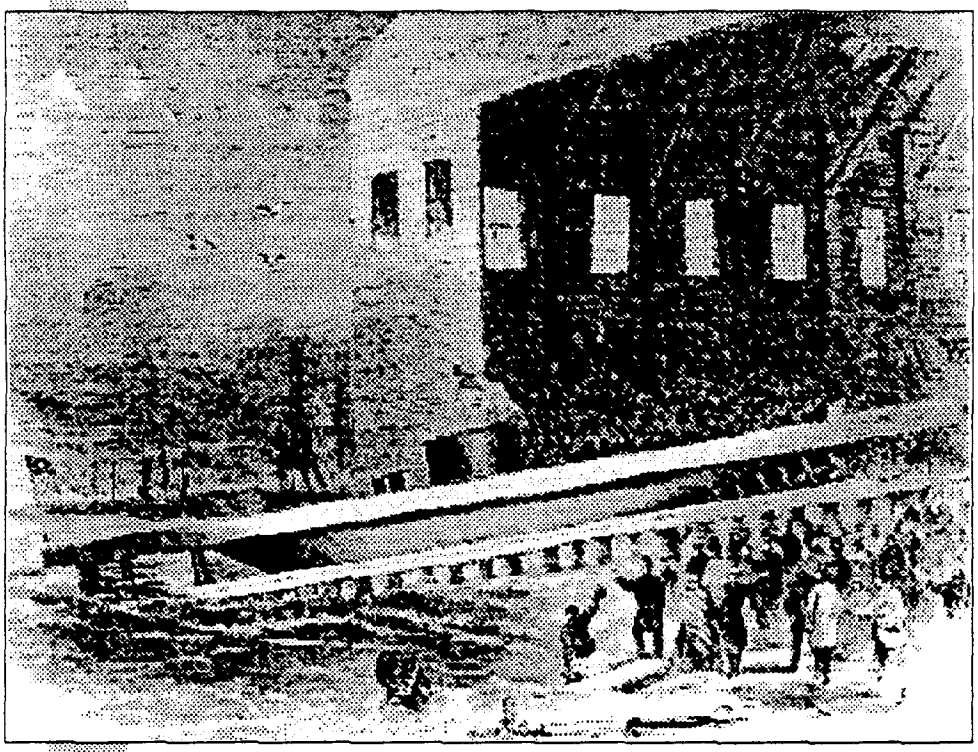


The MONITOR slips down the ways at Continental Iron Works, Greenpoint, Long Island, New York on January 30, 1862.

On March 9, 1862, at Hampton Roads, Virginia, the USS MONITOR fought what has become one of the most celebrated battles in American naval history. This historic engagement, the first battle of ironclad warships, was the highlight of a promising service career cut short when the MONITOR was lost at sea on December 31, 1862. While the warship proved to be as "impregnable to shot and shell" as her designer, Swedish-American engineer John Ericsson, had promised, the ironclad was unable to weather heavy, gale-driven seas off Cape Hatteras, North Carolina.

In 1973, an interdisciplinary scientific party employed intensive historical research and sophisticated electronic equipment to locate and subsequently identify the historic vessel's remains. Announcements of the discovery stimulated considerable interest in further investigating the wreck, recovering its artifacts, and possibly salvaging it. To ensure that the MONITOR would be preserved as a resource of national significance, the U.S. Department of Commerce designated the wreck as the United States' first National Marine Sanctuary on January 30, 1975.

Today the MONITOR represents a unique legacy from our Nation's past. The shipwreck and its contents comprise an irreplaceable historical record and represent a monument to the American naval tradition that the vessel itself helped to create.

Archaeological investigations of the MONITOR can provide an opportunity to examine aspects of our past that are not recorded in surviving manuscript sources. Artifacts from the ship's stores and personal property of the crew can greatly enhance our understanding of life aboard the United States Navy's first ironclad warship.

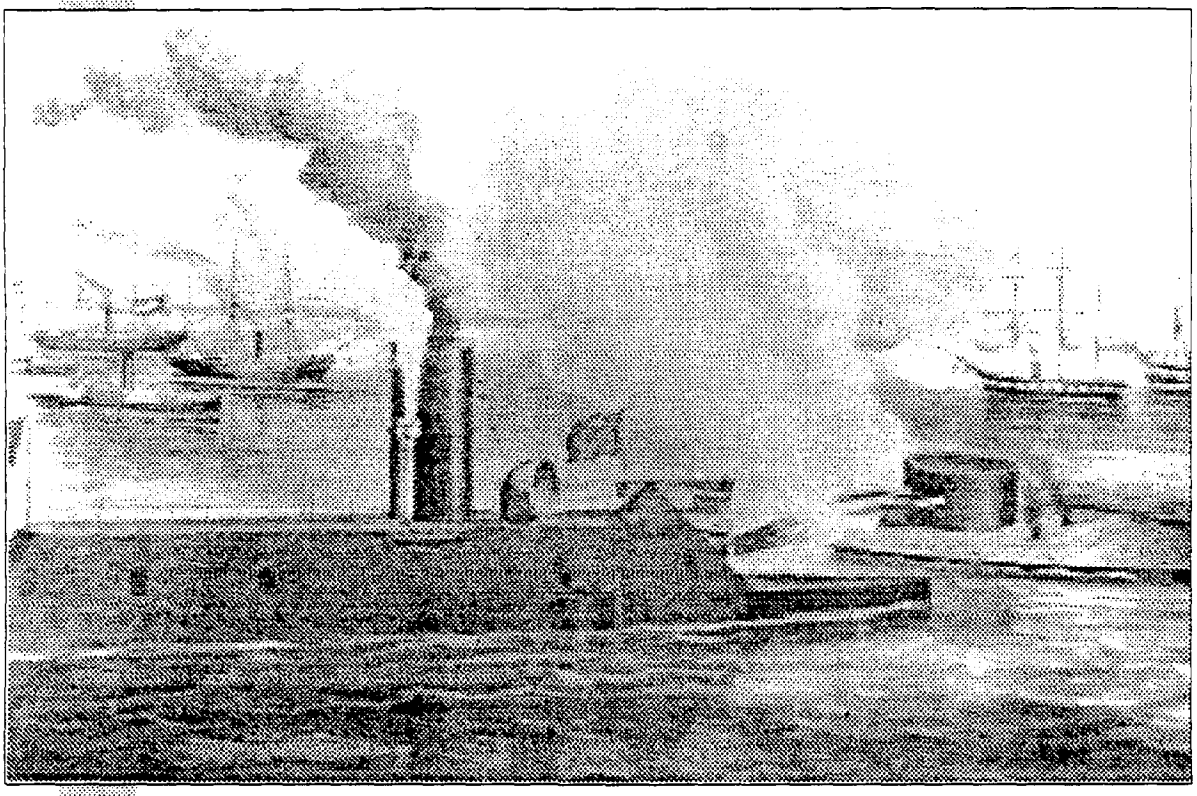
This management plan provides an integrated program of resource protection, research, and interpretation. It outlines research objectives that will contribute to determining the proper disposition of the wreck, and management actions for resource protection and preservation. The basic store of knowledge regarding this unique resource will also be enhanced.

The management plan also provides the framework for an expanded education program for the Sanctuary. The site must be brought to the people since it is impossible for most people to visit the site. The education program also addresses the need to inform the site's users of the MONITOR's significance. This will limit inadvertent damage to the wreck. To reinforce these education efforts and to further protect the site, the U.S. Coast Guard has undertaken expanded enforcement of the Sanctuary's regulations.

Lastly, this plan considers options related to increasing access to the Sanctuary for nonresearch purposes.

This management plan, which will replace the 1983 management plan for the Sanctuary, sets forth management policies for the MONITOR that recognize its importance as an irreplaceable cultural resource and as a National Marine Sanctuary. The draft plan provides the public the opportunity to participate very early in the decision-making process concerning management of the site. After the draft plan is reviewed and comments have been received, a final plan and revised regulations for the site will be issued. This plan will be updated as needed.

Introduction



Artist's conception of the battle between the USS MONITOR and the CSS VIRGINIA (MERRIMACK) on March 9, 1862, in Hampton Roads, Virginia.

The National Marine Sanctuary Program

The Marine Protection, Research, and Sanctuaries Act of 1972 (16 U.S.C. 1431) (the Act), authorizes the Secretary of Commerce to designate discrete areas as National Marine Sanctuaries to promote comprehensive management of their special ecological, historical, recreational, and aesthetic resources. National Marine Sanctuaries may be designated in coastal and ocean waters, in submerged lands, and in the Great Lakes and their connecting waters. The Act is administered by the National Oceanic and Atmospheric Administration (NOAA) through the Office of Ocean and Coastal Resource Management's Sanctuaries and Reserves Division (SRD).

Program Goals

The SRD's goal is to establish a system of National Marine Sanctuaries based on the identification, designation, and comprehensive management of special marine areas for the long-term protection and use of resources by the public. The overall goals of the National Marine Sanctuary Program are to:

- Enhance resource protection through comprehensive and coordinated conservation and management of Sanctuary resources that complement existing regulatory authorities;
- Support, promote, coordinate, and conduct scientific research and monitoring of marine resources to improve the management in National Marine Sanctuaries;
- Enhance public awareness, understanding, and wise use of the marine environment through public interpretive, educational, and recreational programs; and
- Facilitate, to the extent compatible with the primary objective of resource protection, multiple uses of National Marine Sanctuaries.

Sanctuary Designations

Location	*Year*
Monitor	*Jan. 1975*
Key Largo	*Dec. 1975*
Channel Islands	*Sept. 1980*
Looe Key	*Jan. 1981*
Gray's Reef	*Jan. 1981*
Gulf of the Farallones	*Jan. 1981*
Fagatele Bay	*April 1986*
Cordell Bank	*May 1989*
Florida Keys	*Nov. 1990*
Flower Garden Banks	*Nov. 1991*

The Sanctuaries

Ten National Marine Sanctuaries have been established since the Program's inception in 1972. They include near-shore coral reefs and open ocean, and range in size from one to over 2,600 square nautical miles. The Sanctuaries harbor a fascinating array of plants and animals, from whales to brightly colored sea snails. In many cases, these protected waters provide a secure habitat for species close to extinction. Some of the Sanctuaries protect significant historical and cultural resources, as well as natural resources.

Many of the Sanctuaries are also cherished recreational spots for diving and fishing in addition to supporting valuable commercial industries, such as the harvesting of fish and kelp. A major part of the challenge of managing these areas is balancing compatible multiple uses of the resources. These Sanctuaries are a public trust to be managed for the use and enjoyment of present and future generations.

Following are descriptions of the existing National Marine Sanctuaries (NMS):

- The ***Monitor*** National Marine Sanctuary (NMS) protects the wreck of the Civil War ironclad, the U.S.S. MONITOR. It was designated in January 1975, and is 1 nautical mile in diameter. The Sanctuary is located 16.1 nautical miles southeast of Cape Hatteras, North Carolina.

- The ***Key Largo*** NMS was designated in December 1975, and provides protection and management to a 100-square--mile area of tropical coral reefs south of Miami, Florida. The Sanctuary is a seaward extension of the John Pennekamp State Coral Reef Park.

- The ***Channel Islands*** NMS was designated in September 1980, and encompasses 1,252 square miles off the coast of Santa Barbara, California. The Sanctuary surrounds the four northern Channel Islands and Santa Barbara Island, and protects valuable habitats for marine mammals, including seals and seabirds.

- The ***Looe Key*** NMS was designated in January 1981, and consists of a submerged section of the Florida reef southwest of Big Pine Key. The 5.32-square-mile site provides a wide variety of activities, and includes a beautiful "spur and groove" coral formation supporting a diverse marine community.

- The ***Gray's Reef*** NMS, designated in January 1981, is a submerged live bottom area located on the South Atlantic continental shelf due east of Sapelo Island, Georgia. The Sanctuary encompasses 17 square miles and protects a highly productive and unusual habitat for a wide variety of species including corals, invertebrates, and endangered and threatened sea turtles.

- The ***Gulf of the Farallones*** NMS was designated in January 1981, and encompasses 948 square miles off the northern coast of San Francisco, California. The Sanctuary includes important habitats for a diverse array of marine mammals and seabirds, as well as ocean-dwelling (pelagic) fish, plants, and bottom-dwelling (benthic) organisms.

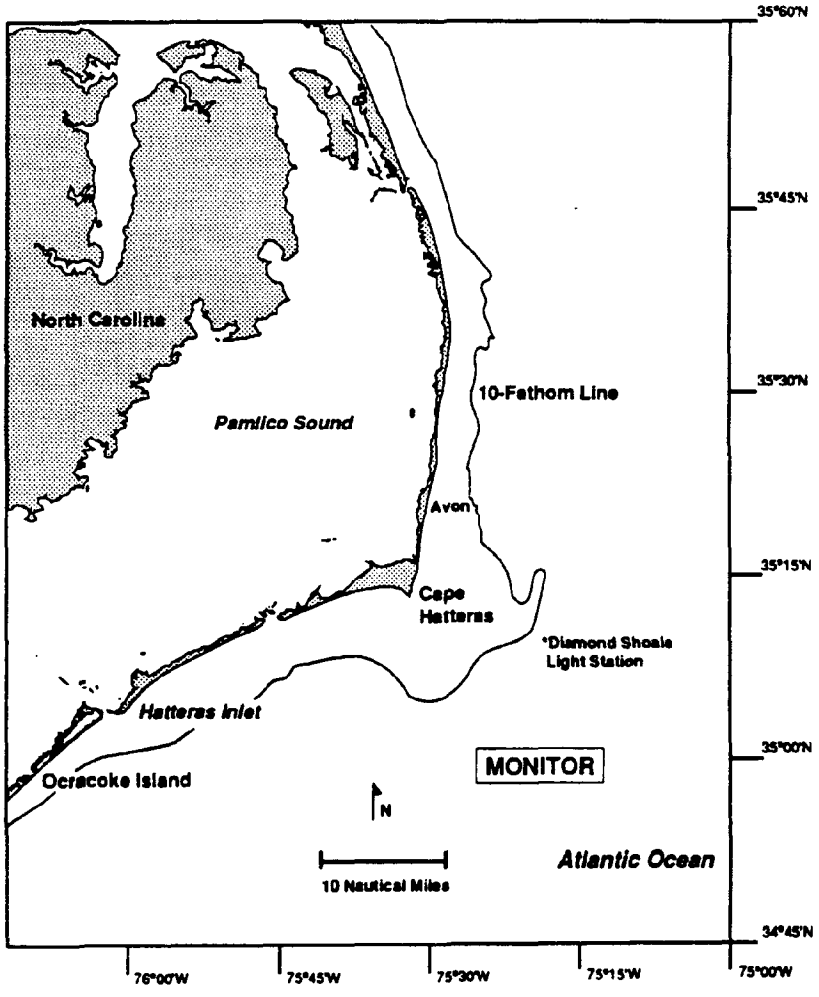
- The ***Fagatele Bay*** NMS in American Samoa was designated in April 1986. The 163-acre bay site contains deep-water coral terrace formations unique to the high islands of the tropical Pacific. The Sanctuary protects habitat for a diverse array of marine flora and fauna, including the endangered hawksbill sea turtle and the threatened green sea turtle.

- The ***Cordell Bank*** NMS, offshore of California, was designated in May 1989. The 397-square-mile site surrounds a granite formation which provides habitat for an unusual assortment of marine and intertidal species, including colonies of purple hydrocorals. Abundant fish species attract feeding seabirds and cetaceans (whales, porpoises and dolphins).

- The ***Florida Keys*** NMS was Congressionally designated in November 1990, and encompasses approximately 2,600 square miles of coral reefs, seagrass beds, and related shoreline habitats off of Florida. NOAA is required to complete a comprehensive management plan, including implementing regulations, by May 1993. Upon its completion, existing National Marine Sanctuaries at Key Largo and Looe Key will be incorporated into this larger Sanctuary.

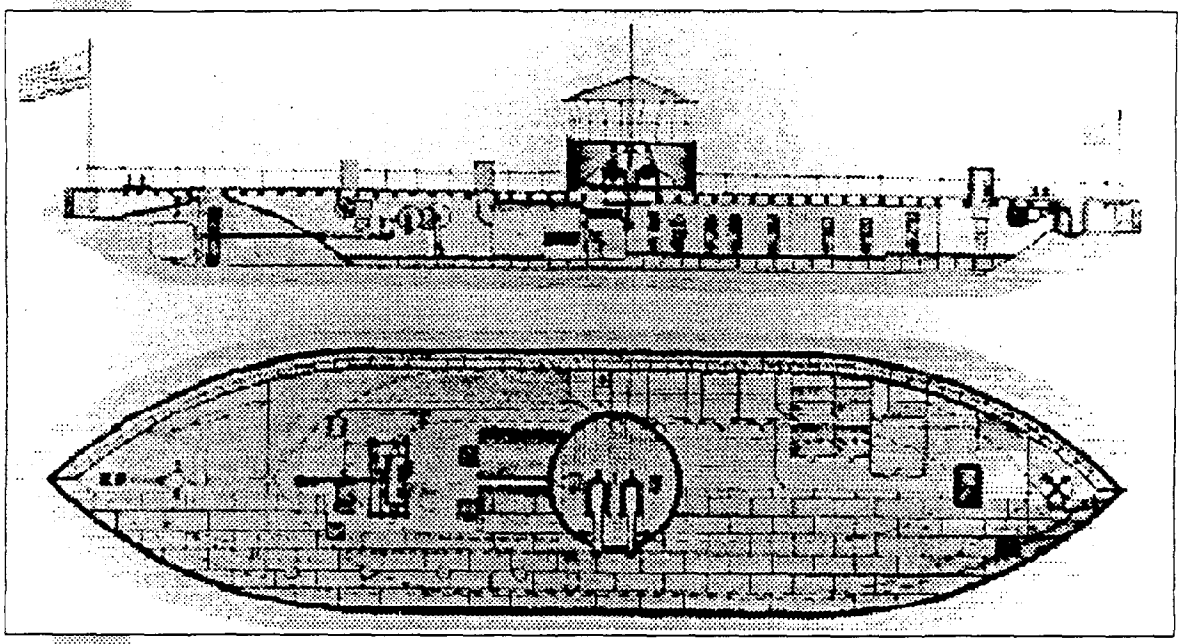
- The ***Flower Garden Banks*** NMS encompasses 42 square miles surrounding the East and West Flower Garden Banks, situated over 100 miles off the coast of Texas. Designated in November 1991, the Sanctuary protects the northernmost coral reefs on the North American continental shelf.

The Division is currently studying or preparing draft designation documents for six additional proposed Sanctuaries: Stellwagen Bank, Massachusetts; Monterey Bay, California; North Puget Sound, Washington; Olympic Coast, Washington; Norfolk Canyon, Virginia; and Thunder Bay, Michigan.



The shipwreck lies 16.1 miles south-southeast of the Cape Hatteras Lighthouse in 230 feet of water.

The MONITOR Sanctuary



Transect and plan views of the USS MONITOR. The ship, a high-tech marvel of naval engineering in its day, cost $275,000 to build.

The USS MONITOR was designed by John Ericsson, a Swedish-American engineer, and was built and launched at Greenpoint, Long Island, New York. The total cost to produce the ship was $275,000. The MONITOR was the first American ironclad, the first ship with a revolving gun turret, the first ship with an anchor that could be raised and lowered from below deck, the first ship with forced-air ventilation, and last, but certainly not least, the first ship to become a National Marine Sanctuary. Her first battle, the first between ironclad warships, was fought on March 9, 1862, at Hampton Roads, Virginia. It involved the Confederate vessel CSS VIRGINIA (MERRIMACK). The battle of the MONITOR and the MERRIMACK was one of the most celebrated naval battles in American history, changing forever the course of naval warfare and setting a totally new direction in naval architecture and ship design.

Eleven months after being launched, the MONITOR's promising career was cut short. The MONITOR and 16 of her crew were lost while under tow by the vessel USS RHODE ISLAND off of Cape Hatteras, North Carolina, an area known as the "Graveyard of the Atlantic." The ironclad, unable to weather the heavy gale-driven seas, foundered and sank on December 31, 1862.

The MONITOR's final resting place remained unknown in the Atlantic Ocean

for more than a century. Several searches for the wreck took place after World War II.

In August 1973, scientists conducting a project using side-scan sonar onboard the R/V EASTWARD located the MONITOR's remains and obtained the first video of the wreckage using remotely operated TV cameras. The group did not confirm its discovery until a second expedition to the site verified the ship's identity.

January 1862

The USS MONITOR is launched at the Continental Iron Works in Greenpoint, Long Island, New York.

Sanctuary Designation

The discovery of the MONITOR was announced jointly by Duke University and the North Carolina Department of Archives and History on March 7, 1974. A question was immediately posed: What should be done with one of the most important objects — both symbolically and actually — in American history? After many discussions among a wide variety of Federal, state and local organizations as well as historians and the public, the Governor of North Carolina nominated the wreck of the MONITOR for National Marine Sanctuary status on September 26, 1974. To further the cause of protecting this valuable historic resource, the Secretary of the Interior listed the USS MONITOR on the National Register of Historic Places on October 11, 1974.

On January 30, 1975, the Secretary of Commerce made history when he designated the USS MONITOR and 1 square nautical mile surrounding the vessel as the Nation's first National Marine Sanctuary.

On March 9, 1987, the 125th anniversary of the MONITOR-VIRGINIA (MERRIMACK) battle, the Secretary of the Interior, Donald Hodel, designated the USS MONITOR as a National Historic Landmark.

Goals and Objectives

Sanctuary goals and objectives provide the framework for developing management strategies. The goals and objectives direct Sanctuary activities which address the dual purposes of resource protection and multiple use, and are consistent with the intent of the National Marine Sanctuary Program.

Management strategies for the MONITOR NMS focus on the goals and objectives outlined in this section. While these goals and objectives are listed separately, their effects overlap. Resource protection efforts, for instance, include expanding the Sanctuary's education program.

Resource Protection

Title III of the MPRSA authorizes NOAA to manage sanctuaries' historical resources, among others. In doing so, the agency must comply with the Federal Archaeological Program as outlined in Executive Order 11593 and Federal statutes defined in the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resources Protection Act of 1979 (ARPA), as well as those acts' implementing regulations.

NOAA had no existing historical/cultural resources management policy when the U.S.S. MONITOR was designated as the first National Marine Sanctuary in 1975. Since the MONITOR was the most significant historic shipwreck in U.S. waters, a special policy was adopted for that site [Title III, sec. 314 added by PL 100-627, MPRSA]. In subsequently designated sanctuaries, the historic resources were considered secondary to the natural resources. At the time of printing of the MONITOR NMS Management Plan, the agency is in the process of formalizing a comprehensive historical resources policy that will address the historic and cultural resources of all of the National Marine Sanctuaries.

The highest priority management goal for the MONITOR Sanctuary is resource protection through comprehensive and coordinated conservation and management of the wreck and its surroundings. An important part of our Nation's history, the MONITOR, its artifacts, the archaeological information at the site, the archaeological collection and the MONITOR's records are all part of the Sanctuary's resources. Specific objectives of the resource protection program are to:

- Expand the current program for surveillance of the site and enforcement of Sanctuary regulations;
- Promote public awareness of, and voluntary user compliance with, Sanctuary regulations through an education program stressing the site's sensitivity to human disturbances;
- Conduct monitoring studies to document changes in the MONITOR and its immediate environment;
- Consider stabilizing the MONITOR;
- Recover and conserve MONITOR artifacts which are in danger of being lost, and add them to the MONITOR collection at the Mariner's Museum in Newport News, Virginia or other appropriate public viewing sites.

Research

The Sanctuary requires a research program that addresses resource protection and other management issues. Research supported by NOAA has been directed primarily toward protection by understanding the MONITOR and how it has been affected by natural deterioration and human activities. This research was critical to developing effective approaches to management issues.

The current research goals for the MONITOR Sanctuary are to ensure the scientific recovery and dissemination of historical and cultural information preserved at the MONITOR site; and to conserve and manage the remains of the MONITOR in a manner that appropriately enhances both the significance and interpretive potential of the warship. Specific objectives of the research program include:

March 1862

The USS MONITOR and CSS VIRGINIA make naval history during a four-hour battle in Hampton Roads, Virginia.

- Baseline studies to aid in determining the rate of deterioration of the ship, and changes in the Sanctuary environment;
- Predictive studies to assess causes and effects of corrosion, environmental conditions, and human activities and to anticipate management issues;
- An assessment of the potential for stabilizing the MONITOR [MARSS Project, see "Proposed On-site Activities"]
- Archaeological studies which may include the recovery of artifacts.

Education

The education program is directed to enhancing public awareness and understanding of the significance of the Sanctuary and the need to protect the MONITOR. Specific objectives of the education program are to:

- Provide the public with information on the MONITOR and its surroundings, with emphasis on the need to protect the wreck and its artifacts;
- Enhance and broaden support for the Sanctuary and Sanctuary management by offering programs suited to audiences with a range of interests;
- Encourage information exchange among parties interested in the MONITOR.

Special Use

Specific objectives are to:

- Assess the potential for increasing public access to the MONITOR;
- Provide public access and use of the MONITOR Collection.

Environmental Setting

The MONITOR's remains lie on the Continental Shelf 16.1 nautical miles south-southeast of the Cape Hatteras Light. The MONITOR Sanctuary consists of a vertical column of water in the Atlantic Ocean 1 nautical mile in diameter extending from the surface to the seabed. The center of the water column is 35°00'23" north latitude and 75°24'32" west longitude.

In the vicinity of the MONITOR, the ocean bottom is composed of sand, shell hash, and clay below the surface. Bathymetric (topography of the sea floor) profiles of the area indicate that the bottom surface slopes gently away to the southeast.

Visibility. Visibility in the 230-foot-deep water varies according to turbidity, the presence of microorganisms, and the intensity and angle of sunlight. Records to date indicate that visibility varies from approximately 10 feet to more than 100 feet.

Currents. Although the site appears to be outside the western margin of the Gulf Stream, eddies created by that current may directly influence the area. Changes in current direction and velocity occur frequently. Within a 24-hour period, direction has been observed to change 360 degrees. Current velocities are known to vary from 0.02 to more than 1.5 knots at the bottom, and surface currents are considerably stronger. Temperature in the area seems to be related to these current patterns. While little specific data is available, temperature projections, based on similar sites, indicate an annual variation between 52 degrees and 68 degrees Fahrenheit.

Wind patterns. In the area of the Sanctuary, wind patterns can be generalized as prevailing from the north to west between November and February; north-northwest and south-southwest between March and June; south-southeast during July and August; and north-northeast during September and October. However, unpredictable variation has been observed and spontaneous storms frequently occur.

Biological organisms. A biological study carried out by NOAA in June 1990 identified encrusting organisms and motile invertebrates on the wreck (Table 1). The wide variety of encrusting organisms included coral, sponges, sea squirts, sea anemones, hydroids, barnacles, tube worms, mussels, and oysters. *Oculina arbuscula* was the most abundant coral, but at least 40 species of sponges were observed. Although many invertebrates are cryptic and hard to detect, those identified were crabs, brittlestars, sea urchins, snapping shrimp, and spiny lobsters.

The MONITOR's remains are located near the northern boundary of tropical reef fish habitat and therefore support a mixture of temperate and tropical species. Fish abundance has been estimated by visual counts and verified from videotape from five transect lines over the length of the MONITOR. Twenty-five species were observed (Table 2). The most abundant species was the red barbier. Thousands of fish, approximately 1.5 to 5 inches total length, formed schools at the stern and throughout the center of the vessel. The predominant predator species was the greater amberjack. Fifty-four fish were counted when approaching the MONITOR. Approximately half of the wreck was

Table 1. Invertebrates in the Sanctuary

Common Name *(Scientific Name)*	Common Name *(Scientific Name)*
Tree coral *(Oculina arbuscula)*	Hydroids
Whip coral *(Leptogorgia sp.)*	Barnacles
Whip coral *(Lothogorgia sp.)*	Tube worms *(Filograna implexa)*
	Date mussel *(Lithophaga sp.)*
Vase sponges *(Xextospongia sp.)*	Oyster *(Ostrea sp.)*
Barrel sponges	Ark shells *(Arca sp.)*
Finger sponges	
Encrusting sponges	Snapping shrimp
Garlic sponges	Xanthia crab *(Eriphia gonagra)*
Sponge *(Erylus sp.)*	Porcellanid crab *(Pachycheles rugimanus)*
	Brittlestar *(Ophiothrix angulata)*
Sea squirts	Sea urchin *(Lytechinus sp.)*
Sea anemones	Caribbean spiny lobster *(Panulirus argus)*

Table 2. Fish Associated with the Sanctuary

Common Name	Scientific Name	Number Observed
Greater amberjack	*Seriola dumerili*	54
Almaco jack	*Seriola rivoliana*	3
Dolphin	*Coryphaena hippurus* Linnaeus	8
Great barracuda	*Sphyraena barracuda*	1
Black sea bass	*Centropristis striata*	35
Bank sea bass	*Centropristis ocyurus*	10
Speckled hind	*Epinephelus drummondhayi*	4
Gag	*Mycteroperca microlepis*	1
Red barbier	*Hemanthias vivanus*	thousands
Belted sandfish	*Serranus subligarius*	1
Scup	*Stenotomus chrysops*	14
Red porgy	*Pagrus pagrus*	2
Pinfish	*Lagodon rhomboides*	1
Vermilion snapper	*Rhomboplites aurorubens*	6
Tomtate	*Haemulon aurolineatum*	2
Reef butterflyfish	*Chaetodon sedentarius*	2
Slippery dick	*Halichoeres bivittatus*	10
Scad	*Decapterus sp.*	hundreds
Cubbyu	*Equetus umbrosus*	1
Jackknife fish	*Equetus lanceolatus*	1
Purple reeffish	*Chromis scotti*	3
Cocoa damselfish	*Pomacentrus variabilis*	5
Leopard toadfish	*Opsanus pardus*	3
Reticulate moray	*Muraena retifera*	1
Sandbar shark	*Carcharhinus plumbeus*	1

visible so the number of jacks was estimated to be 108. Estimates of other common species included scad (several hundred); black sea bass (35); scup (14); bank sea bass (10); slippery dick (10); and vermilion snapper (6).

The MONITOR appears to be a productive reef. However, cold-water intrusions by the Labrador Current may limit the productivity. Several fish kills have been observed in the Cape Hatteras area since 1957. Reports indicate cold-water intrusion on the outer continental shelf may have contributed to the killing of red snapper and vermilion snapper. Most of the tropical species on the MONITOR appear to be juveniles or young adults.

December 1862

The MONITOR sinks in a gale off Cape Hatteras, North Carolina.

Vessel Condition

The MONITOR has been at the site since December 31, 1862, and is generally well preserved. However, there is structural damage and deterioration. Its present condition can be directly related to damage that occurred at the time of sinking, deterioration that has resulted from more than a century of immersion in a sea-water environment, and damage from human activities. It is believed that depth-charging during World War II resulted in severe damage to the stern armor belt, as well as to the lower hull forward of the midships' bulkhead. In addition, there is some damage resulting from vessels anchoring on the MONITOR. Fishing hooks and lines have been noticed on expeditions by NOAA and private permittees.

The inverted hull of the MONITOR rests partially submerged in bottom sediment with the port quarter stern supported by the displaced turret. The position of the turret under the port quarter armor belt and settling along the starboard armor belt caused by scouring action have combined to elevate the stern of the wreck and to produce an exaggerated list to starboard. In recent years, concerns have developed about the structural integrity of the port armor belt and particularly about its ability to continue to support the port side. Detailed observations in 1987, 1990, and 1991 failed to produce any indications of distortion or buckling in the port armor belt. Careful examination of the surface of the armor belt failed to locate distinct seams between armor belt plates, which would indicate that the plates are separating from each other and/or from the structure.

The Hull

Analysis of data from several expeditions to the site indicates that the condition of the aft portion of the hull differs dramatically from the remains forward of midships. Along the sloping sides of the displacement hull aft of where the midships bulkhead stood, the plating has deteriorated, and to a large degree only the

remains of the iron frames survive. Above the aft overhead, the distinctive skeg is visible although displaced from its original position. The propeller and shaft are completely displaced. The shaft lies atop other displaced material beneath the stern, while the propeller lies atop structural material below and to port of its original position. The yoke that connected to the skeg is supported by debris and/or bottom sediment.

The starboard quarter is buried to a depth of approximately 5 feet while the port quarter is supported more than 7 feet above the bottom of the turret. Inside the hull, steam propulsion and auxiliary machinery appear to be collapsing toward the bottom sediment under the weight of the remains of the lower hull, which rests directly on the engineering space. Additional damage to the engineering space has been caused by the displacement of the skeg and propeller shaft.

August 1973

The wreck of the MONITOR is located 16 miles off Cape Hatteras in 230 feet of water.

The midships bulkhead has almost completely collapsed. Without support from the bulkhead, the lower hull is settling toward the bow. The twisted bulkhead frame is visible immediately forward of its original position, lying in the wreck atop displaced stanchions and the remains of hull plates. Much of the damage, including the loss of a number of armor plates from the port side and bottom of the lower hull, is the result of recent human impact, such as anchoring. This is evidenced by displaced hull plates that have been dragged upstream and atop articulated plates on the bottom of the lower hull.

Forward of the midships, damage to the lower hull is extensive. Although displaced sections of lower hull plating exist along the starboard side, no intact plating can be identified along the port side. Much of the material in evidence along the port side has been identified as portions of the interior of the ship, or equipment and fittings that were stowed below the crew's quarters, ward room, and galley. From the circular anchor well immediately aft of the bow, anchor chain leads over the starboard side and into the bottom sediments to the south. Aft of the anchor well, the deck beams supporting the pilot house are visible.

Available data indicate that the destruction of the lower hull forward of the midships bulkhead closely resembles that which results from an explosion of considerable force. As the site is located in the traditional shipping lane off the North Carolina coast, it is possible that the damage is the result of the effects of depth charging during World War II. During the war, enemy submarines frequently rested on the continental shelf during the day, surfacing at night to destroy merchant ships along the coast. In an effort to prevent this, the Navy and the Coast Guard made a practice of dropping depth charges on all sonar targets. Quite possibly one of these targets was the MONITOR. An explosion of this type in the area forward of the midships bulkhead would certainly have been

capable of collapsing the already weakened hull of the vessel, and may also explain the distribution of hull plates upstream and a considerable distance from the MONITOR.

The Deck

Forward of the pilothouse, virtually all of the deck is free of bottom sediment. A portion of the pilothouse structure is exposed above the sediment. From this point aft to the present position of the turret, the entire port side of the vessel remains free of the bottom, supporting its own weight and that of the sediment accumulated within the confines of the hull. Aft of the engineering space, the deck has suffered extensive damage and considerably less of the deck there supports itself. The armor plating on the deck has completely separated from the deck planking in several areas, indicating advanced deterioration.

April 1974

A second expedition to the site confirms the MONITOR's location.

At both the wardroom and midships locations where the deck of the MONITOR is ruptured, material associated with the ship is washing out of the wreck and onto the sediment below. The amount of material redistributed in this manner appears to be augmented by pressure created by the current flowing over the wreck.

In the vicinity of the turret, deck plates have been dislodged by destruction associated with the stem of the vessel. Behind and aft of the turret, sections of the deck have completely separated and armor plates hang suspended by deteriorated fittings. Forward of the turret, distinct separations between deck plates indicate that these plates are also separating from the wreck. Below the position of the port boiler uptake hatch, a portion of the smoke-pipe breaching is protruding from the deck and into the sediment.

The Turret

Structurally, the turret's remains appear to be in good condition. The gun ports are blocked by heavy wrought-iron port stoppers that protected the ordnance and gun crew from hostile fire. Wood bucklers that covered the gun ports while underway are not present, although bolts that held them in place are intact and protrude from the rammer holes in the port stoppers. Aside from basketball-sized dents still visible through the heavy fouling — possibly from the MONITOR's engagement with the MERRIMACK — little damage is apparent. Examination of the turret floor during NOAA's 1979 expedition produced no indication of access hatches in the base. A depression in the center of the turret floor indicated that the shaft upon which the turret rotated had dislodged as the turret and hull separated. Debris from the deck above, including large sections of hull plate and what appear to be pipes, have collapsed onto the turret floor.

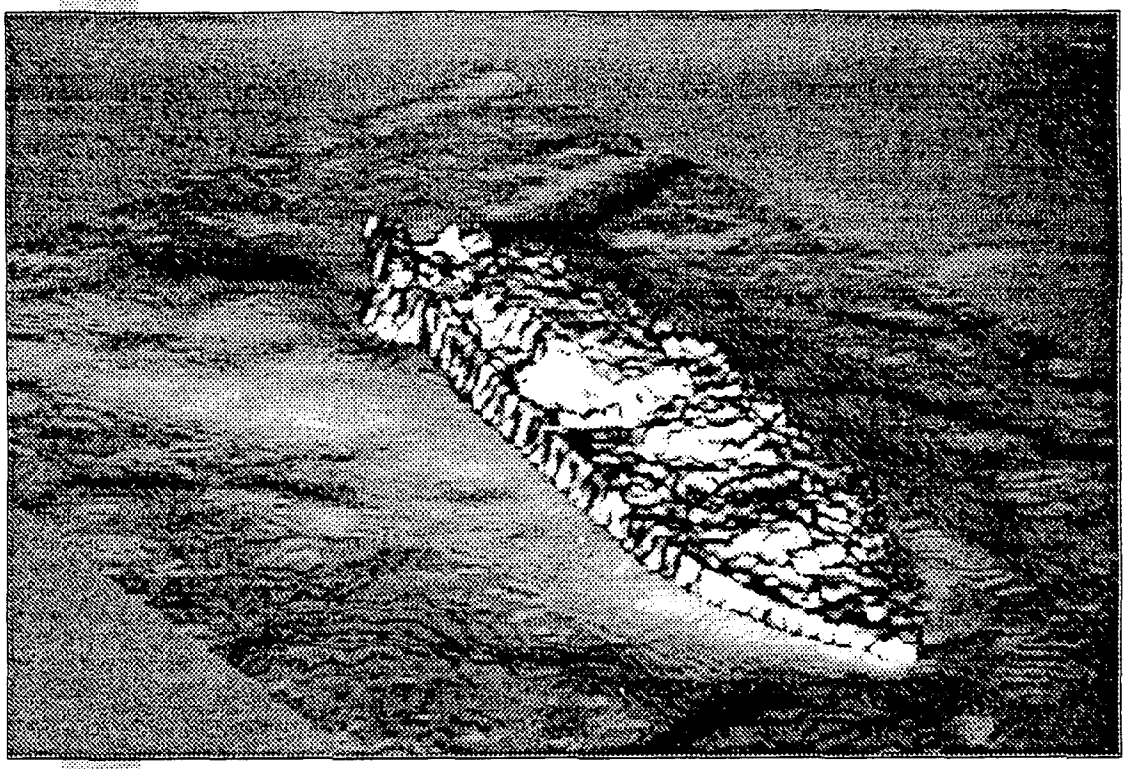
Sanctuary Management

NOAA's management of the MONITOR Sanctuary is designed to protect the site and its resources. NOAA conducts and permits scientific research on the MONITOR at the site. NOAA is also involved in a number of off-site management activities, including research and public education efforts. The Mariners' Museum in Newport News, Virginia was selected in 1987 as the principal museum for curatorship of artifacts and papers of the MONITOR Collection. Plans to fully utilize the Mariners' Museum are provided in the Administrative and Education sections of this plan.

Since designation of the site as a National Marine Sanctuary, access to the MONITOR has been limited to scientific research related to the vessel. Prior to conducting these activities, NOAA must issue a permit pursuant to 15 CFR 924.5 (Appendix A). A summary of NOAA-permitted expeditions to the MONITOR Sanctuary is included in Appendix B.

The current management structure for the MONITOR Sanctuary includes a Sanctuary Manager and an Education Coordinator located in Tidewater Virginia. This staff is supervised by the Chief, Atlantic and Great Lakes Branch, Sanctuaries and Reserves Division, NOAA, in Washington, D.C.

Administration



The MONITOR lies 16.1 miles south-southeast of the Cape Hatteras Lighthouse in 230 feet of water. A computer-generated model of the wreck was developed using 1987 data generated by a three-dimensional sonar survey.

Sanctuaries and Reserves Division

The National Marine Sanctuary Program is administered by the Sanctuaries and Reserves Division (SRD). A site-specific management plan is prepared for individual Sanctuaries to ensure that on-site activities involving resource protection, research, and education are coordinated and are consistent with national Sanctuary goals and objectives.

The SRD develops a general budget, setting out expenditures for program development, operating costs, and staffing. Funding priorities are reviewed and adjusted annually to reflect evolving conditions at the MONITOR Sanctuary as well as National Marine Sanctuary Program priorities and requirements. The SRD also establishes priorities and procedures in response to

specific issues in each Sanctuary. Detailed SRD responsibilities are listed in the Resource Protection, Research, and Education sections of this document.

MAMHU

In 1990, the SRD created the position of Marine Archaeologist within the Technical Projects Branch. In 1991, the SRD added the position of Maritime Historian. This professional nucleus makes up the Marine Archaeology & Maritime History Unit (MAMHU). MAMHU is responsible for Marine Protection, Research, and Sanctuaries Act program requirements relating to historical/cultural requirements and other Federal statutes, most notably the National Historic Preservation Act. MAMHU reviews and makes recommendations on research permits involving historical/cultural resources, and plans and conducts research in both National Marine Sanctuaries and National Estuarine Research Reserves.

January 1975

The MONITOR site is designated as the nation's first marine sanctuary under the management of the National Oceanic and Atmospheric Administration (NOAA).

Sanctuary Manager

The Sanctuary Manager for the MONITOR reports directly to the SRD Chief of the Atlantic and Great Lakes Region, in Washington, D.C. The SRD is responsible for the overall management of the Sanctuary; however, the Sanctuary Manager is responsible for the day-to-day management of the site. The Manager represents the SRD as a spokesperson for the MONITOR Sanctuary. The Sanctuary's headquarters is currently located at NOAA's Atlantic Marine Center in Norfolk, Virginia. The Sanctuary's headquarters may be moved in the future to respond to long- term priorities for the site. Possible locations include Newport News, Virginia and coastal North Carolina. The Sanctuary's Education Coordinator maintains an office at the Mariners' Museum in Newport News.

Sanctuary Staffing

Minimum staffing will consist of a full-time Sanctuary Manager and Education Coordinator. Currently, part-time clerical support is being negotiated.

Depending on the budget and personnel assigned to the MONITOR Sanctuary, staffing could include a NOAA Sanctuary Manager, an administrative assistant, a research coordinator, an education coordinator, and one or more joint positions of interpreter/enforcement official. The Sanctuary staff will work closely with the U.S. Coast Guard and other Federal and State agencies to provide enforcement and surveillance in the Sanctuary.

Assisting Entities

U.S. Coast Guard

The United States Coast Guard (USCG) assists NOAA in surveillance efforts and actions related to enforcing regulations at the MONITOR Sanctuary.

During normal operations, 5th District Coast Guard units operating in the vicinity of the Sanctuary conduct surveillance for violations of Sanctuary regulations. USCG units conduct logistics on Diamond Shoals Light, undertake search-and-rescue missions in the area, and assist other vessels with transit.

July-August 1977

The MONITOR is photographed during the first NOAA-sponsored expedition to the site. A hull plate and a brass navigation lantern are recovered.

Mariners' Museum

On September 4, 1986, NOAA published guidelines in the *Federal Register* for submitting proposals for consideration as principal museum for the MONITOR Collection of Artifacts and Papers (now known as the MONITOR Collection). Based on these guidelines, the Mariners' Museum was designated as the Principal Museum for the MONITOR Collection. A Memorandum of Agreement between NOAA and the museum was signed on July 13, 1987 (Appendix C).

This agreement sets out the responsibilities of NOAA and the Mariners' Museum related to the MONITOR Sanctuary. A programmatic cooperative agreement was signed between NOAA and the Mariners' Museum in October 1989. This agreement remains in effect until October 1999.

In the agreements, NOAA committed to:

- provide financial support for the services of the Mariners' Museum subject to annual appropriations, Federal law, and NOAA's approval;
- deliver to the Museum MONITOR NMS artifacts, papers, and records;
- provide funds to support base services and initiate special projects agreed to by the Museum and NOAA; and to designate a field manager for the MONITOR Sanctuary to assist the Museum in implementing these agreements.

In the agreements, the Mariners' Museum committed to:

- maintain archives, a research library, and a conservation facility for the MONITOR;

- develop permanent and traveling exhibits for the Sanctuary, and assist other participating museums in developing exhibits and interpretive displays;
- manage the lending of portions of the MONITOR Collection to other qualified repositories for research, interpretation, or educational purposes;
- maintain the MONITOR Collection under environmentally and physically secure conditions within storage, exhibition, laboratory, and study areas;
- inspect the MONITOR Collection on a regular basis and make recommendations as to necessary maintenance conservation measures;
- adequately insure the MONITOR Collection from theft or other loss;
- catalog all known MONITOR-related materials in both private and public collections;
- assist and advise NOAA regarding the future planning of the MONITOR NMS and development of the MONITOR Collection;
- comply with relevant Federal regulations regarding the curatorship of Federally owned archaeological collections;
- provide other services relating to the MONITOR NMS as agreed to by NOAA and the Museum.

Guidelines for use of the MONITOR Collection by researchers are found in Appendix D.

August 1979

Archaeologists carry out several major scientific objectives, including placement of a reference system, inclinometer measurements, and a small excavation during a 28-day, NOAA-sponsored expedition.

MHRET

In 1991, NOAA established the Marine Historical Resource Evaluation Team (MHRET). The MHRET is chaired by NOAA, and its membership includes the Chief Archaeologist from the Minerals Management Service, U.S. Department of the Interior; the Curator of Maritime History at the Smithsonian Institution; the Director of Maritime Preservation for the National Trust for Historic Preservation; and the Senior Historian of the U.S. Navy.

The MONITOR Sanctuary Manager and the SRD can seek the MHRET's advice concerning resource management issues related to the MONITOR Sanctuary. The intention is to augment, not replace, NOAA's ongoing efforts to solicit opinions from both the public and maritime-history professionals.

Roles and Responsibilities

Resource Protection

The Sanctuary Manager:

- Recommends to the SRD annual priorities for allocating resource-protection funds, both to ensure consistency with Sanctuary regulations and to provide adequate protection;
- Coordinates surveillance and enforcement activities by providing liaison with Federal, State, regional and local agencies;
- Reports regularly to the SRD on surveillance and enforcement activities, including emergencies;
- Evaluates overall progress toward the Sanctuary Program's resource-protection objectives, and prepares semiannual and bi-monthly progress reports highlighting activities for the SRD;
- Evaluates and approves all research, education and special-use permits.

The Sanctuaries and Reserves Division:

- Approves funding priorities for resource protection;
- Monitors the effectiveness of interagency agreements for surveillance and enforcement, and negotiates required changes;
- Monitors the effectiveness of existing Sanctuary regulations, and promulgates required changes;
- Evaluates overall progress toward the resource-protection objectives of the National Marine Sanctuary Program.

The U.S. Coast Guard:

- Ensures enforcement of Sanctuary regulations;
- Provides suggestions on surveillance at the site.

Research

The Sanctuary Manager:

- Develops general areas of research and specific projects to resolve management issues;
- Prepares the Sanctuary Research Plan (SRP);
- Reviews research documents and progress reports submitted by contractors;
- Prepares assessments of research needs and priorities based on management requirements and research continuity;
- Implements the SRP;
- Coordinates research and monitoring activities in the Sanctuary in cooperation with the SRD and other interested parties/agencies;
- Reviews and evaluates research proposals considering the views of the SRD, concerned individuals and interest groups;
- Administers the research-permitting process;
- Approves or denies permits for research activities to ensure consistency with Sanctuary regulations and to provide additional technical review;
- Oversees permitted research activities.

The Sanctuaries and Reserves Division:

- Approves an annual Sanctuary Research Plan (SRP) for each Sanctuary;
- Prepares an annual National Research Plan (NRP) and budget, based on the SRPs of individual Sanctuaries and in accordance with priorities determined at the National level;
- Reviews all interim and final research reports submitted by the Sanctuary Manager;
- Provides additional technical reviews, as needed, for proposed research activities.

Education

The Sanctuary Manager:

- Recommends and provides to the SRD an annual educational priorities list and budget;
- Supervises the design/production of Sanctuary educational materials and facilities and provides training for educational staff;
- Encourages local and regional organizations to participate in Sanctuary education efforts;
- Oversees development of any facilities constructed for the Sanctuary, reviews site analyses/design specifications, and makes recommendations on construction and maintenance contracts;
- Approves or denies Sanctuary education permits to ensure compliance with Sanctuary regulations;
- Issues education permits and oversees those activities.

The Education Coordinator:

- Develops and recommends the annual education plan to the Sanctuary Manager;
- Implements the education plan;
- Disseminates information to the public about the Sanctuary and the National Marine Sanctuary Program;
- With the Sanctuary Manager, makes presentations and produces written material for articles and educational packages;
- Maintains the MONITOR Collection and serves as primary Sanctuary liaison to the Mariners' Museum.

The Sanctuaries and Reserves Division:

- Reviews and approves the list of annual priorities for education and the annual education budget prepared by the Sanctuary Manager;
- Reviews and approves design proposals for all educational facilities;
- Reviews and approves all educational materials prepared for the Sanctuary;
- Evaluates progress toward accomplishing objectives for education, and adjusts short- and long-term priorities accordingly.

Site Administration

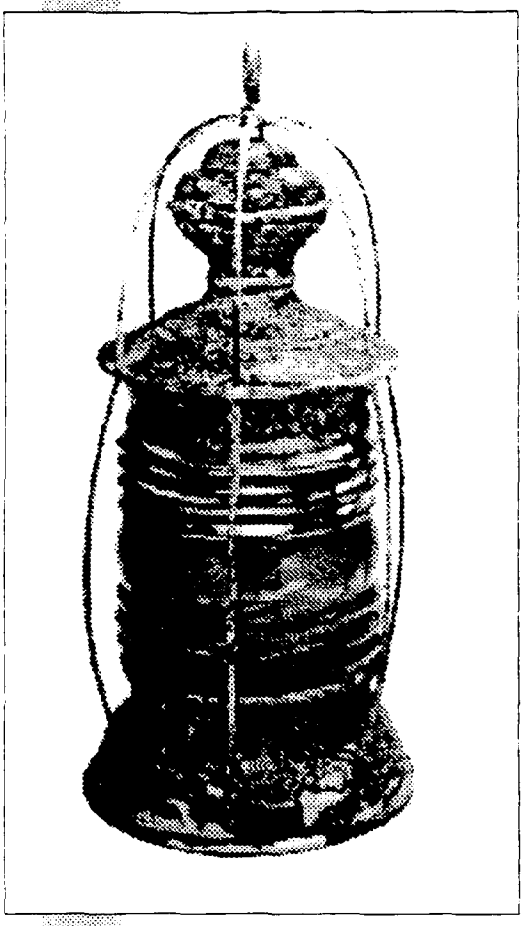
The Sanctuary Manager:

- Coordinates on-site efforts of all parties involved in Sanctuary activities;
- Identifies, analyzes, and resolves Sanctuary management problems and issues;
- Coordinates Sanctuary management with other Federal and State agencies and private organizations;
- Periodically reviews the management plan and recommends changes to the SRD;
- Prepares the annual Sanctuary budget and submits it to the SRD for approval;
- Oversees day-to-day Sanctuary operations, including administrative functions such as budgeting and purchasing activities;
- Represents Sanctuary viewpoints on local issues at public forums;
- Reviews and issues special-use permits.

The Sanctuaries and Reserves Division:

- Ensures that the Sanctuary is operated in a manner consistent with established National Program policies and with applicable national and international laws, and provides guidance to the Sanctuary Manager;
- Directs and assists the Sanctuary manager in implementing the Management Plan;
- Evaluates the effectiveness of Sanctuary management and regulatory measures;
- Reviews and approves a program budget for the Sanctuary submitted by the Sanctuary Manager;
- Provides funding for overall Sanctuary management and administration.

Resource Protection



A brass navigation lantern with a fresnel lens was recovered from the site in 1977. It is currently on display at The Mariner's Museum in Newport News, Virginia.

Program Objectives

The MONITOR National Marine Sanctuary was established in 1975 under the authority of Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, (16 U.S.C. 1431 et seq.). Because of its national historical significance, the USS MONITOR has also been placed on the National Register of Historic Places and designated a National Historic Landmark.

The primary purpose of the Management Plan is to provide a framework for the responsible protection and management of the MONITOR, all associated artifacts, and the site itself. The Management Plan must also provide for resource protection in accordance with all applicable Federal laws. NOAA must insure that all proposed site activities comply with the regulations of the Marine Protection, Research and Sanctuaries Act; the Uniform Regulations for the Protection of Archaeological Resources; the National Historic Preservation Act (NHPA); and the National Environmental Policy Act (NEPA). In addition, all permit applications are submitted for review under the 36 CFR 106 review process, and approval is required by the Advisory Council on Historic Preservation. The Management Plan outlines several objectives for insuring the protection of the MONITOR Sanctuary.

NOAA has identified four principal objectives for Resource Protection: public awareness, regulation enforcement, stabilization, and controlled artifact recovery.

Public Awareness

The first resource-protection objective is to promote public awareness of, and voluntary user compliance with, Sanctuary regulations through an education program stressing a resource conservation ethic and explaining the site's significance. Management experiences at the MONITOR and other National Marine Sanctuaries have shown that the public must be made aware of the Sanctuary's location, significance, and activities that threaten the resource. An important aspect of managing the Sanctuary is to educate the diving, fishing, and boating public, and also those involved in related service industries (e.g., dive-boat operators, bait-and-tackle shops.) This objective is further addressed in the Education section of this Management Plan.

Consideration is being given to placing a NOAA-maintained data buoy at the site. This buoy's payload would provide real-time information on wind speed and direction, wave height, sea-level pressure, air temperature, and sea-surface temperature. Weather information gathered at the site would be offered to local mariners as a public service.

1979-1982

The first management plan for the MONITOR Sanctuary is developed and distributed.

Regulation Enforcement

The second resource protection objective is to expand the current enforcement program. The Sanctuary will formalize an agreement to obtain permanent U.S. Coast Guard assistance in enforcing Sanctuary regulations, and consideration is being given to acquiring automatic surveillance equipment at the site. A Sanctuary enforcement officer will be added to the staff as funding allows.

Stabilization

Previous NOAA studies indicate that the MONITOR is slowly deteriorating. NOAA is investigating several options for stabilizing the MONITOR, including cathodic protection and mechanical support. The 1987 study pinpointed "cells" or areas of the wreck where corrosion is occurring more rapidly than at other locations. One option currently being studied is to retard this corrosion process by installing cathodic protection at the cell locations. This system is similar to the method of attaching "zincs" to the hulls of steel ships to retard galvanic action. Additionally, NOAA is studying the possibility of physically stabilizing the weakest portions of the structure, such as the armor belt and stern, through mechanical support such as jacks.

Controlled Artifact Recovery

The fourth resource protection objective is to systematically recover artifacts when necessitated by any of the following situations:

- artifacts in danger of being lost to natural elements (currents, corrosion, etc.)
- artifacts in danger of being destroyed by deterioration or collapse of the vessel structure
- artifacts deemed important for scientific or archaeological studies.

Should theft and vandalism prove to be a significant problem at the site, additional artifact recovery could become necessary.

Management Options

Recovery

The option of complete recovery of the MONITOR was evaluated by NOAA over the past decade. This option has been eliminated for a variety of reasons. The consensus of scientists who have worked at the site or reviewed the scientific data from the site is that any attempt at total recovery would result in extensive damage and/or destruction of major portions of the vessel. The option of partial recovery, such as recovery of the turret or other major components was also evaluated, with the same conclusion. The turret lies beneath the inverted hull, thus increasing the difficulty of removal without severe damage to the remaining structure.

While the technology exists to conserve the MONITOR, should it be recovered, there is at present no facility capable of performing conservation on the entire hull or even major portions such as the turret. (The turret alone is more than 21 feet in diameter, 10 feet high and weighs in excess of 100 tons, not counting the two 11-inch Dahlgren cannons and other equipment currently entombed within it.) Furthermore, data generated through on-site investigations by NOAA in 1979, 1987, 1990 and 1991 indicate that the wreck has lost much of its structural integrity, particularly in the area aft of the midships bulkhead. These factors, along with the exorbitant costs estimated for recovery and preservation (some estimates were in excess of $100 million), led NOAA to conclude that the recovery option was not viable.

In-Situ Preservation

In-situ preservation of the MONITOR is preferred in concert with NOAA's general policy on historical and cultural resources, and the Federal Archaeological Program. Recent NOAA surveys of the MONITOR show that at certain locations, corrosion and other factors have severely compromised the vessel's structural integrity. Thus, to further *In-situ* preservation, cathodic protection and physical stabilization of portions of the armor belt are being considered to prevent further deterioration.

During the 1987 NOAA expedition, baseline corrosion measurements were taken at several hundred locations on the ship as a preliminary assessment of the potential for *in-situ* protection. However, NOAA's 1990 reconnaissance expeditions to the site documented changes in the vessel, including collapse of portions of the deck at the stern. These changes may render at least part of the 1987 data invalid, since collapses and the resulting shifts of structural material could have interrupted the electrical continuity that existed in 1987. Total cathodic protection would require comprehensive on-site investigations to conduct current tests to assess electrical conductivity. Limited cathodic protection at the turret-armor belt junction would require additional on-site data. This would provide some measure of protection to the armor belt where continuity exists.

Other forms of *in-situ* preservation may be considered in the MONITOR NMS. Cofferdams, freezing, and underwater domes have been suggested; however, these alternatives do not appear technologically feasible at this time.

February 1983

A revised management plan for the MONITOR Sanctuary is finalized and distributed.

Current On-site Activities

Site inspection. Periodic resource assessment and documentation of the MONITOR does take place and will continue. NOAA prefers *in-situ* preservation, but exercises the option of recovering artifacts in danger of being lost. NOAA carries out conservation, preservation, interpretation and the display of artifacts with the aid of the Mariners' Museum.

NOAA-sponsored research. NOAA has sponsored or participated in a number of scientific research expeditions to the MONITOR site, as outlined in Appendix B, and will continue to do so as personnel and funding permit.

Privately funded research. NOAA welcomes proposals from privately funded organizations for scientific research at the MONITOR NMS. Proposals that comply with the review criteria outlined in this Management Plan will be approved and the resulting data and reports will be added to

the growing body of information on the site. In 1991 NOAA actively sought proposals from outside sources through a notice in the *Federal Register*, and plans to continue this policy of encouraging participation in ongoing research at the Sanctuary.

Proposed On-site Activities

NOAA-sponsored research. NOAA is considering a series of major scientific research activities at the MONITOR site in 1993 as part of the MONITOR Archaeological Research and Structural Surveys (MARSS) project. The objectives of this project include completing the research necessary to detail the MONITOR's current condition; physically stabilizing portions of the MONITOR's hull; and mapping, recovering and conserving any artifacts determined to be in danger of damage or loss. A MARSS operations plan is being prepared to address research needs, project goals, archaeological and engineering methodology, and artifact conservation and curatorship.

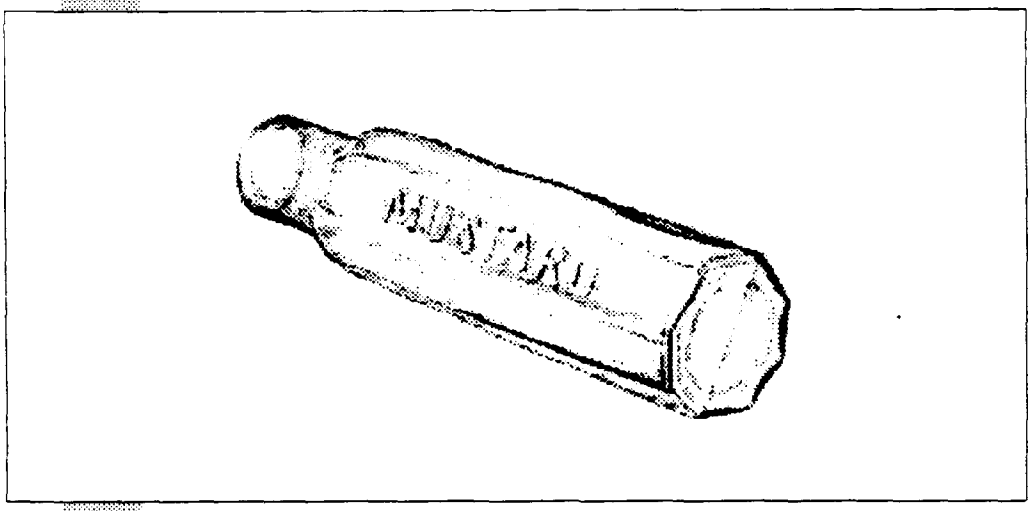
Privately funded research. As stated in the previous section, NOAA will continue to welcome and review proposals from privately funded organizations for scientific research at the MONITOR NMS. It is expected that additional permits will be issued for privately funded research projects in the coming years, and that NOAA will participate in these projects to the fullest extent possible.

Recreational access. Although protecting the resource is the most important management objective for Marine Sanctuaries, NOAA also seeks to provide maximum access to the Sanctuaries for the public's benefit and enjoyment. Based on its experience in managing the Sanctuary, NOAA has determined that the MONITOR can support limited access to divers for nonresearch purposes. The MARSS project will supply additional information necessary for making a final determination of the conditions for recreational access.

Unlimited access. Unlimited access is not an acceptable option due to the high probability of adverse impact from anchors, debris, or other material intentionally or unintentionally coming into contact with the vessel. However, limited access to the MONITOR for nonresearch purposes is being considered as an acceptable option. This access would be controlled so as not to compromise the site's archaeological integrity or historical value. Restrictions would be established to protect the resource. A special-use permit would be required, which identifies and conditions the allowed/prohibited activities during the visit (e.g., taking photographs/removing artifacts, respectively. On-board observers would be an option for all NOAA-permitted activities. This recognizes the expressed interest in increased public access to the Sanctuary, while still carrying out NOAA's mandate under the MPRSA to protect this national historic resource.

Mooring system. An underwater mooring system is also being considered. The mooring would accommodate a small diving support vessel and would be available for use by permitted research and nonresearch activities. Such a mooring would not be attached to a surface buoy, and thus would pose no hazard to navigation.

Research



This octagonal mustard bottle was one of several 19th-century condiment containers recovered during the 1979 NOAA-sponsored expedition.

Program Objectives

Sanctuary research projects funded by SRD will generally address the resolution of management issues and concerns. The Sanctuary Manager and SRD staff will follow research selection procedures established by SRD to ensure that the Sanctuary's research program is consistent with the policies and directions of the National Marine Sanctuary Program. Research selection procedures include preparing an annual Sanctuary Research Plan and reviewing applications for research submitted by other organizations, both private and governmental.

Since 1977, research at the MONITOR site has been directed toward documenting the wreck in detail and understanding how it has been affected by natural deterioration and human activities. Since research itself may result in harm to the resource, or increase the risk of harm, all research conducted at the MONITOR site is subject to the Sanctuary's permit regulations, to the SRD's permit guidelines (see Appendices A and E), and all applicable Federal historic preservation legislation.

In 1987, NOAA completed baseline studies at the site that are essential for determining the rate of deterioration of the hull and changes in the Sanctuary environment. In 1990 and 1991, NOAA conducted site inspection studies to document changes in the MONITOR and its immediate environment.

General research goals for the Sanctuary are the continued scientific recovery and dissemination of historical and cultural information preserved at the site, the continued scientific study of the MONITOR as an artificial reef, and the careful review and monitoring of privately-sponsored research activities in order to ensure that the site is protected and preserved and that the research results will make the maximum contribution to the overall data base.

August 1983

A five-day, NOAA-sponsored expedition recovers the MONITOR's unique, four-fluked anchor.

Research Objectives

Research is essential to the acquisition of data that contribute directly to the resolution of management, interpretation, protection, and preservation issues in the MONITOR Sanctuary.The following section outlines research topics and tasks that yield data of the highest priority. Anyone interested in developing alternative proposals are encouraged to seek technical assistance from NOAA. At the present time, NOAA will encourage and give highest priority to research proposals that contribute to responsible-option assessments and yield the following types of information:

- Trends data generated through predictive studies designed to assess causes and effects of corrosion, environmental conditions, and human activities;
- Engineering data that will permit accurate assessment of the potential for stabilizing the MONITOR's hull *in situ* through cathodic protection, mechanical support or other means;
- Predictive studies that assess and attempt to quantify the potential benefits and risks of increasing public access to the MONITOR for nonresearch activities;
- Historical data generated through archival records and on-site investigation to enable development of a comprehensive depiction of the MONITOR as the vessel existed on December 31, 1862;
- Archaeological data that contribute to developing an adequate model of the nature and disposition of the wreck and its associated artifacts through application of systematic principles of underwater archaeology;
- Engineering studies to determine missing design and construction information for the vessel, methods of deploying equipment and personnel on deep-water archaeological sites, and development of predictive models on the effects of alternative recovery methods for the wreck or its selected features;
- Conservation data to identify preservation problems with the wreck *in situ* and to develop predictive models on the

problems encountered with recovery, stabilization and display of the wreck and its associated artifacts;

- Biological studies of the MONITOR as a living artificial reef of exact known age.

August 1985

Controlled magnetometer and side-scan sonar surveys are carried out during a NOAA-sponsored expedition.

Research Examples

In order to promote the development of research proposals for the MONITOR Sanctuary, the following examples have been included to suggest a variety of research topics and needed information.

- *Study topic:* On-site engineering and structural data collection. *Information needs:* Annual resource assessment to determine changes occurring on the wreck structure due to natural deterioration and/or human impact. Recovery of small, endangered artifacts that may have been dislodged from the wreck.

- *Study topic:* Analysis of water conditions and sea state. *Information needs:* A survey of the existing weather and environmental records pertaining to the Hatteras area and the development of a comprehensive model of the annual weather conditions will be an invaluable aid to on-site research.

- *Study topic:* Study of currents, visibility, erosion, depositional patterns, and the nature of the water column in the MONITOR Sanctuary. *Information needs:* An environmental definition of the MONITOR site is necessary for two reasons. First, to determine the effect of the environment on the wreck and, second, to assist in planning and conducting on-site research. The deployment and maintenance of current meter arrays, the collection of water column analysis data (e.g., salinity, temperature, depth (STD), oxygen content, suspended particulate matter) and the collation of these data will assist in determining the conditions encountered during on-site archaeological research. This study was initiated in 1990 with the deployment of a thermistor to record water temperature.

- *Study topic:* Surface and subsurface sediment studies. *Information needs:* Analysis of the character of sediments will assist in interpreting sediment deposition and archaeological site formation.

- *Study topic:* Continued site definition. *Information needs:* Locate and identify material associated with the wreck but existing outside the confines of the hull remains.

- *Study topic:* On-site test excavations. *Information needs:* Evaluate the nature and extent of the archaeological record. Test excavations both inside and outside the confines of the hull could generate

historical, engineering and environmental data that would expand knowledge of the wreck site and its environment.

- *Study topic:* Develop a conservation plan for conservation, curatorship and display of material recovered from the site for each of the following options: (a) continued limited collection of small artifacts; (b) partial or selected recovery of portions of the wreck. *Information needs:* Detailed conservation plan, including necessary procedures, facilities, budget, etc.

- *Study topic:* Conduct a photogrammetric analysis of existing stereo photography. *Information needs:* To generate horizontal and vertical profiles and produce an accurate photomosaic of the wreck site. (This was initiated in FY91.)

- *Study topic:* Corrosion studies. *Information needs:* Data generated by electric field gradient measurements, structure-to-structure electrolyte potential measurements, and other tests to assist in evaluating the potential for *in-situ* preservation.

- *Study topic:* Evaluate purchasing and utilizing a lightweight ROV for ongoing management and research activitie. *Information needs:* A lightweight ROV adapted to carry video and photographic recording systems, able to be deployed from vessels of convenience, would require minimal surface support and operational expense and would enable Sanctuary personnel to more readily carry out ongoing management and research activities.

- *Study topic:* Physical *in-situ* support of the stern of the wreck. *Information needs:* As weakening of the port armor belt may cause the stern to collapse, options for physically supporting and stabilizing the portion of the stern presently supported by the turret should be considered.

- *Study topic:* Contingency plans for collapse of the port armor belt. *Information needs:* Because the port armor belt, the primary support member for that side of the wreck, is exhibiting signs of stress, a contingency plan for the recovery, conservation, curatorship, and display of the turret and/or other portions of the vessel that are of special interest should be considered.

- *Study topic:* Archival research of World War II records relative to depth-charging activities in the vicinity of the MONITOR. *Information needs:* Documentation verifying that the remains of the MONITOR were depth-charged during World War II would enhance our understanding of the site and of the extensive damage that has occurred at the stern of the wreck.

- *Study topic:* Archival research of additional MONITOR data. *Information needs:* Papers relating to the MONITOR's inventor, John Ericsson, have not all been catalogued; other papers in public and private repositories might be identified and added to the MONITOR archives.

Program Elements

Annual Research Plan

March 1987

The Mariners' Museum in Newport News, Virginia, is designated as the principal museum for the MONITOR Collection of artifacts, papers and records.

An overall five-year National Sanctuary Research Plan will be prepared for the National Marine Sanctuary Program with detailed annual plans to implement the overall plan. Annual Research Plans for individual National Marine Sanctuaries are incorporated into the National Marine Sanctuary Program's research plan.

The annual research planning process for the Sanctuary will involve the following steps:

- Sanctuary management concerns will be identified, with supporting evidence and rationale;

- Research priorities consistent with the Sanctuary's goals will be established, based upon the identification of management concerns. Research priorities will be recommended by the Sanctuary Manager to the SRD headquarters staff.

Important factors to be considered in establishing research priorities include immediate or evolving management issues which can be resolved through directed research; and prospects of related research in progress.

Following SRD headquarters' approval of the Sanctuary's annual Research Plan, the plan will be incorporated into the National Marine Sanctuary Program's Research Plan for the year. A research announcement and request for detailed research proposals will be prepared. The announcement and request for proposals will discuss the identified management concerns, and summarize past and current related research. Approval and funding of research proposals are the responsibility of the SRD headquarters staff.

As funds become available, NOAA will conduct research at the MONITOR. The Sanctuary Manager will also work with independent researchers with private funds who are interested in conducting research at the site. Research selection procedures will be those established by the SRD for the entire National Marine Sanctuary Program to ensure that the MONITOR Sanctuary's research program is consistent with the policies and directions of the National Program.

Project/Permit Monitoring

As a routine activity, the Sanctuary Manager will monitor the performance of researchers conducting research activities at the Sanctuary. The Manager will maintain records of all current research equipment being used on-site, the frequency of researchers' visits to the site, and current progress on each project.

Interim progress reports by the researchers will be reviewed by the Sanctuary Manager to ensure adherence to the terms of the research permit. Final research reports may be reviewed by scientists recognized in a particular field of research, as well as by resource managers, before final approval of the report the Sanctuary Manager and SRD headquarters.

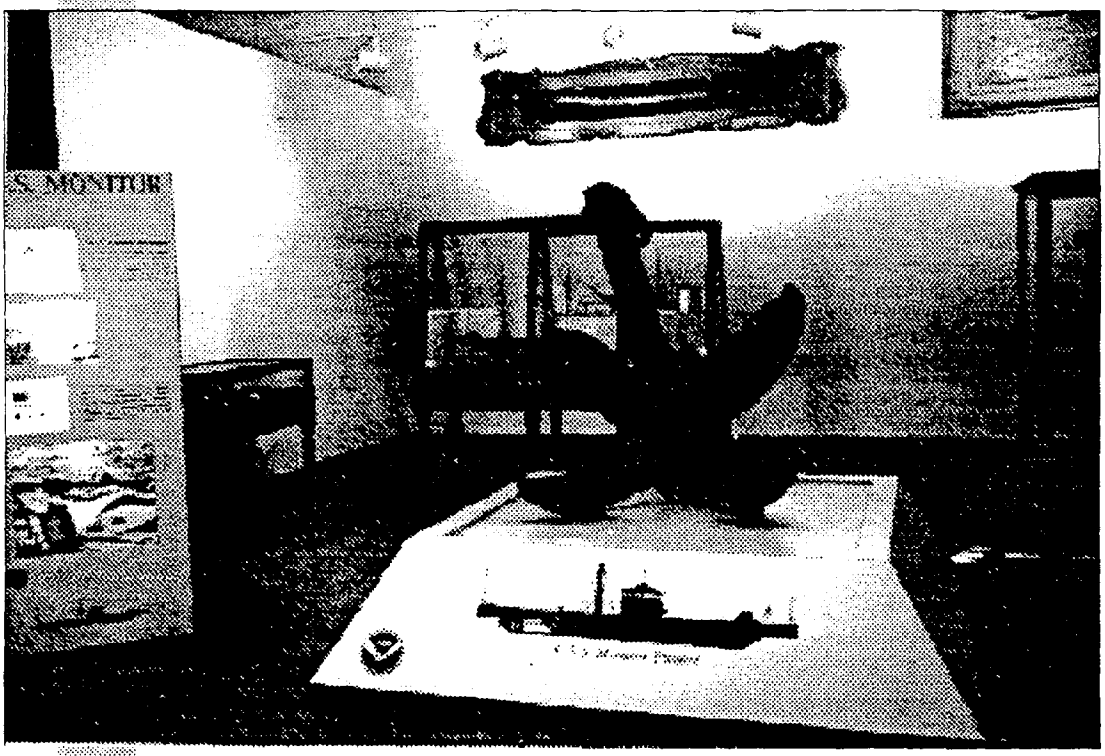
May-June 1987

Corrosion studies and a structural survey are among the objectives completed using a remotely operated vehicle (ROV) during a three-week NOAA-sponsored expedition to the sanctuary.

Information Exchange

Sanctuary research funded by other sources is encouraged to complement research directly funded by NOAA. To assist in this research exchange effort, NOAA will make Sanctuary research data bases (derived from past and ongoing research projects) available to other agencies and private institutions.

Education



The MONITOR's unique four-fluked anchor was recovered in 1983. It is currently on display at the Mariner's Museum.

Program Objectives

The purpose of the education program is to enhance public awareness and understanding of the Sanctuary's significance and the need to protect this vital historic resource. Specific program objectives and educational products are described in this section.

Public Awareness

Expanding public awareness involves four primary aims: promoting a general understanding of the National Marine Sanctuary Program; bringing the MONITOR to the public; enhancing the understanding of the natural and man-made processes affecting the MONITOR; and enhancing the understanding of the diversity of marine life inhabiting the MONITOR Sanctuary. A discussion of each of these aims follows.

Promoting a general understanding of the National Marine Sanctuary Program.

This can be achieved by:

- Including National Marine Sanctuary Program material in mailings of MONITOR Sanctuary information and as part of public programs and presentations on the MONITOR Sanctuary.

- Depicting the MONITOR Sanctuary as part of a national program in exhibits and displays.

- In cooperation with other sanctuary education coordinators, developing joint education products focusing on two or more sanctuaries to emphasize the diversity of resources encompassed by the National Marine Sanctuary Program.

Bringing the MONITOR to the public.

This can be achieved by:

- Developing a wide variety of materials, including brochures, posters, publications, slide and video programs, and presentations on the value of the MONITOR as a National Marine Sanctuary and as a significant historic vessel.

- Sponsoring special events and programs designed to present various aspects of the MONITOR National Marine Sanctuary and to encourage public participation.

- Participating in programs, special events, and other forums developed and sponsored by other agencies or organizations by providing presentations and/or displays on the MONITOR National Marine Sanctuary.

Enhancing the understanding of the natural and man-made processes affecting the MONITOR.

This can be achieved by:

- Developing a variety of products geared to the public—including elementary, middle, and high school students—that promote the understanding of the significance and present condition of the MONITOR and the need to preserve it.

- Developing products to reach special-interest groups, including fishermen and sport divers, to provide current information on regulations and policy decisions, and to promote the MONITOR's preservation.

- Developing products geared to the professional community to solicit information about current research on other wrecks that may be applicable to preserving the MONITOR.

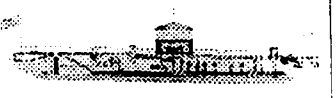
Enhancing the understanding of the diversity of marine life inhabiting the MONITOR Sanctuary.

This can be achieved by:

- Incorporating current information on marine life into programs and presentations on the MONITOR.

- Developing displays and exhibits that promote information and stimulate interest in the MONITOR as an artificial reef.

- Continuing to work with marine biologists to update the list of marine life documented at the site as part of every expedition report or summary.



June-July 1990

NOAA personnel conduct a reconnaissance and assessment of the MONITOR.

Research & Archives

There are two primary aims to this objective:

Maintaining the MONITOR Collection currently curated by the Mariner's Museum in Newport News, Virginia.

This can be achieved by:

- Continuing to archive research data as it is generated, and making it available to the public.

- Continuing to archive papers from NOAA, other agencies, and individuals involved in MONITOR- related activities as they become available, and making them available to the public.

- Soliciting donations of MONITOR-related material from the private sector.

- Producing annual supplements to the MONITOR Collection catalog.

Promoting interpretation and display of MONITOR-related artifacts and research materials in diverse geographic areas.

This can be achieved by:

- Developing plans for interpreting and displaying artifacts recovered from the Sanctuary to ensure that the public has access to them in exhibits.

- Developing traveling exhibits and displays on various aspects of the MONITOR Sanctuary, including the vessel's history, on-site research, current management directions, and marine life found on the wreck.

- Providing such material as documents, photographs, slides and videotapes to museums, educational institutions, and public and private organizations wishing to develop MONITOR-related displays or exhibits.

Educational Opportunities

There are two primary aims to this objective:

Promoting the use of MONITOR-related education products in school systems and workshops in which large groups of students participate.

This can be achieved by:

- Working with educators in school systems, museums, and institutions of higher learning to identify products with diverse appeal that can reach large numbers of students.

- Working with the Mariner's Museum Education Division and other maritime museums to develop unique and timely applications for MONITOR-related products.

- Working with the Mariner's Museum and other maritime museums to develop workshops that utilize MONITOR-related products in ways that stimulate interest in the MONITOR, the National Marine Sanctuary Program, and cultural and natural resources.

Encouraging the use of MONITOR-related research data for school papers, theses, dissertations, and special studies projects.

This can be achieved by:

- Developing an ongoing internship program in conjunction with one or more high schools and/or universities. The program will emphasize the fields of museum studies, maritime history, cultural resource management, underwater archaeology, and science.

- Notifying museums, educational institutions, and the public of the MONITOR Collection's availability and diversity.

- Issuing periodic announcements of new data acquisitions to the MONITOR Collection.

Education Products

Media

June & October 1991

NOAA personnel conduct a reconnaissance and assessment of the MONITOR.

MONITOR National Marine Sanctuary Brochure. This illustrated color brochure conforms to SRD standards and includes site location, regulations, and general information about the Sanctuary.

Cheesebox. The *Cheesebox*, an activities report for the Sanctuary, is produced and distributed annually. The newsletter was developed for a general audience and contains current information on MONITOR-related activities including on-site research, exhibits, management issues, and historical notes. The *Cheesebox* is printed on recycled paper.

Poster. A four-color poster that conforms to SRD standards will be produced for the MONITOR Sanctuary.

Narrated Video. Since most of the scientifically valuable data generated by on-site research is on videotape, a 20-minute narrated video will be developed in-house to be used as an adjunct to presentations by MONITOR Sanctuary and headquarters staff. Supplemental handouts will facilitate teachers' and others' use of the video as an educational tool.

Traveling Exhibit for North Carolina. A traveling exhibit detailing the sinking of the MONITOR, the wreck's discovery in 1973, and current on-site research will be developed for North Carolina museums and other facilities. The exhibit will consist of photographs and a video.

Comprehensive Bibliography. This ongoing effort will result in a bibliography with periodic supplements consisting of primary and secondary sources (e.g., news articles, papers, and monographs).

List of Available Materials. This will be an annually updated list of publications, videos and slide programs, brochures, posters, and other materials available to the public. It will be distributed in information packages, as part of presentations and programs on the MONITOR, and to contacts within school systems for history, science, and related courses of study. The list can be updated more frequently if necessary.

Curricula/Special Presentations

Curriculum Development. MONITOR Sanctuary staff will work with educators to develop a curriculum for use in history and science classes. The curriculum initially will target grades 5-6 and will be expanded gradually to develop units for middle and high schools.

Products for Younger Children. A children's book is planned that discusses the MONITOR's significance, John Ericsson's importance as an inventor, the MONITOR-MERRIMACK battle, the sinking, the wreck's discovery, National Marine Sanctuary designation, and on-site research. Illustrated with black-and-white sketches or line drawings, the book will be reviewed by educators and test-marketed with at least two groups of children before final production.

Internship Program. A continuing internship program will be developed in conjunction with high schools and/or universities. Students interested in museum studies, maritime history, cultural resource management, underwater archaeology, and science will be encouraged to participate.

Special Events. Sanctuary staff will develop concepts for, and also participate in, special MONITOR-related events. Various groups in the Hampton Roads area will celebrate the 130th anniversary of the MONITOR-MERRIMACK battle in 1992, and the Sanctuary staff will present programs and/or develop displays for these ceremonies. NOAA and the Mariner's Museum will host a ceremony to officially open the MONITOR Collection to the public in 1992. Of particular interest will be the 20th anniversary in 1995 of the MONITOR's designation as a National Marine Sanctuary. A commemorative ceremony is planned.

Public Presentations. Sanctuary staff will present programs, as logistically and financially feasible, on the MONITOR National Marine Sanctuary upon request to professional meetings, special-interest groups, public-service organizations, educational institutions, and other events.

March 1992

A draft revised management plan is distributed for public comment.

Cooperative Projects

The MONITOR Trail. This concept, which will be accomplished through museum exhibits, was developed to 1) emphasize specific incidents in the MONITOR's history; 2) recognize geographic areas associated with those incidents; and 3) distribute information on the MONITOR Sanctuary to a wide-ranging and diverse audience. Participating museums include New York's South Seaport Museum, which will relate the story of the MONITOR's construction in association with an exhibit on the development of commerce in the

state; the American Swedish Historical Museum in Philadelphia, which houses the papers of John Ericsson, the ship's designer; The Mariners' Museum in Newport News, Virginia, which will develop an exhibit on the battle; and the Graveyard of the Atlantic Museum to be constructed in Cape Hatteras, North Carolina, which will develop exhibits on the sinking of the MONITOR and research at the site.

Cooperative Projects with the Mariner's Museum. Under the current Memorandum of Agreement between NOAA and the Mariner's Museum, specific cooperative education projects and products will be identified and developed by the museum's Education Division and the Sanctuary Education Coordinator. These include:

- ***Interpreter.*** A professional interpreter is present one day a week to interpret life aboard the MONITOR for museum visitors. Special interpretive programs are developed for events as well as for the holidays, including Christmas.

- ***Paper Model.*** This will be designed for children at the third-grade level and above. It will be an easy-to-assemble model with supplemental information about the MONITOR Sanctuary. The model will be available to school systems and for use in workshops to be developed by the Mariner's Museum.

- ***Exhibits for the Cape Hatteras area.*** Three specific products will be developed in an effort to expand education outreach in the Cape Hatteras area. The first will be laminated copies of the Sanctuary regulations, which will be offered to fishermen and distributed in marinas, restaurants, fish houses, and bait shops. The second will be a wayside exhibit near the ferry terminal to provide information on the Sanctuary, including regulations, to tourists and local residents. The third will be a long-term photographic display placed in the community center or library to provide information on current MONITOR-related activities.

- ***Narrated Slide Program.*** This program will be offered to schools and public-service organizations to provide current information on management directions, on-site research, and MONITOR-related activities. The program will be updated periodically to reflect new research data and current activities.

- ***"Touch Screen" Program.*** The concept for this sophisticated education program will be developed over several years. This product will utilize state-of-the-art electronic media to allow people to interact with computerized programs as they learn about the MONITOR Sanctuary.

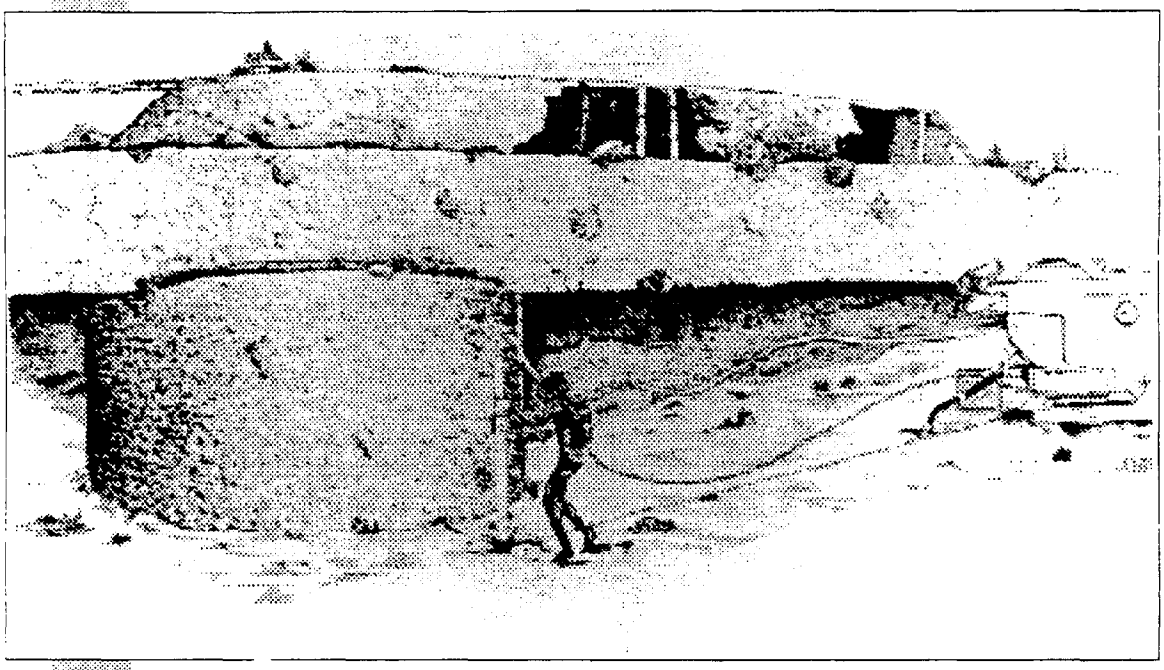
- ***MONITOR Model.*** This will be a three-dimensional model, probably constructed of wood, that can be disassembled and reassembled to encourage hands-on activities in discussing the vessel's construction and the MONITOR's significance to naval history.

- ***Workshops.*** Cooperative workshops will include a simulated dive on the MONITOR for school children, using the video generated by on-site research. Other workshops will incor-

porate the three-dimensional and paper models of the MONITOR.

Cooperative Projects with Other National Marine Sanctuaries. Products may include posters with a regional focus, such as Atlantic and Great Lakes Region sanctuaries, or a combination of sanctuaries selected to illustrate the diversity of resources included in the sanctuary program. Posters would include information on the sanctuaries and a contact for obtaining additional information. Other products with a regional focus could include summaries of research with a general rather than technical focus, and a compendium of information including history, significance, access, and regulations.

Appendices



Artist's rendering of a diver installing data casings adjacent to the turret. The diver has arrived at the wreck in a remotely operated vehicle (far right).

Appendix A: **Final Regulations**

Appendix B: **NOAA-Permitted Expeditions**

Appendix C: **Cooperative Agreement**

Appendix D: **Mariners' Museum: Use of the Collection**

Appendix E: **Permit Guidelines: Archaeological Research**

Appendix F: **Permit Guidelines: Research & Education**

Appendix A: Final Regulations

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U.S. Department of Commerce

National Oceanic and Atmospheric Administration

MONITOR National Marine Sanctuary
Final Regulations

CHAPTER IX—NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, DEPARTMENT OF COMMERCE

PART 924—MONITOR MARINE SANCTUARY

Final Regulations

On January 30, 1975, the Secretary of Commerce designated as a marine sanctuary an area of the Atlantic Ocean around and above the submerged wreckage of the Civil War ironclad MONITOR pursuant to the authority of section 302 (a) of the Marine Protection, Research and Sanctuaries Act of 1972 (86 Stat. 1052, 1061, hereafter the Act). The sanctuary area (hereafter the Sanctuary) is about 16.10 miles south-southeast of Cape Hatteras (North Carolina) Light.

Section 302(f) of the Act directs the Secretary to issue necessary and reasonable regulations to control any activities permitted within a designated marine sanctuary. This section also provides that no permit, license, or other authorization issued pursuant to any other authority shall be valid unless the Secretary shall certify that the permitted activity is consistent with the purposes of Title III of the Act ("Marine Sanctuaries"); and that it can be carried out within the regulations promulgated under section 302(f).

The authority of the Secretary to administer the provisions of the Act has been delegated to the Administrator, National Oceanic and Atmospheric Administration, U.S. Department of Commerce (hereafter the Administrator, 39 FR 10255, March 19, 1974).

On February 5, 1975, the Administrator published in the FEDERAL REGISTER interim regulations applicable to the MONITOR Marine Sanctuary (40 FR 5347), and invited comments on these regulations until March 7, 1975. Comments which have been received have suggested six changes in the regulations as follows:

1. That § 924.2, the description of the Sanctuary, be somewhat shortened and revised to read:

> The Sanctuary consists of a vertical water column in the Atlantic Ocean one mile in diameter extending from the surface to the seabed, the center of which is at 35°00'23" north latitude and 75°24'32" west longitude.

2. That § 924.3, which prohibits "bottom anchoring" in the Sanctuary, be revised to read:

> Anchoring in any manner, stopping, remaining, or drifting without power at any time;

3. That § 924.3(i), which prohibits the "discharging of waste material" into the waters of the Sanctuary, be revised to read:

> Discharging waste material into the water in violation of any Federal statute or regulation.

It was stated that this change was felt to be desirable because of the breadth of the original language, and the difficulty of enforcing a prohibition which could be constructed to extend to routine operational discharges from vessels—such as bilge, sanitary and galley wastes—which discharges would have no adverse impact on the MONITOR.

4. That § 924.4, which lists penalties for the commission of prohibited acts within the Sanctuary, be revised to read:

> Section 303 of the Act authorizes the assessment of a civil penalty of not more than $50,000 against any citizen of the United States for each violation of any regulation issued pursuant to Title III of the Act, and further authorizes proceedings *in rem* against any vessel used in violation of the penalty described above. See also 15 CFR 922 (published at 39 FR 23254, 23257, June 27, 1974), for details applicable to any instance of a violation of these regulations.

Essentially this change substitutes "the penalty described above" for "Any such regulations" at the end of the first sentence of the interim regulations; and rephrases the second and third sentences without substantially changing their meaning.

5. That so much of the last part of § 924.5 as provides that "except that, no permit is required for the conduct of any activity immediately necessary in connection with an air or marine casualty" be revised to read:

> except that, no permit is required for the conduct of any activity necessary for the protection of life, property or the environment.

The suggested change would appear to add an environmental casualty, such as oil spill, to the air and/or marine casualties already contemplated by the regulation.

6. That § 924.7, having to do with certification procedures, be revised so as to require any Federal agency which, as of the effective date of the regulations, has authorized any prohibited activity in the Sanctuary, be required to notify the Administrator of that fact in writing. The change was from "activity," as stated in the interim regulations, to "prohibited activity." It was stated that the Secretary's concern should be with any prohibited activity, not with an activity not prohibited.

Except as noted below, and for the reasons there set out, the Administrator has decided to accept these suggested changes, and they have been incorporated into the final regulations. With regard to the suggested changes in § 924.4 (paragraph 4, above), it is felt that the substitution of "penalty" for "regulations" somewhat misstates the thought involved, since the violation in question is of the regulations, not of the penalty. Otherwise, the suggested changes do not alter the meaning of the interim language. Therefore, § 924.4 will be retained in its present form. With regard to the suggested change in § 924.5 (paragraph 5, above), it is felt that there must be an immediate and urgent need for the activity if it is to be conducted without a permit. Therefore the words "immediately and urgently" will be added before "necessary." At the same time, it is felt that a permit should be required for any activity to be conducted in a sanctuary pertaining to an air or marine casualty already passed, in regard to which there is no need for immediate entry into the sanctuary, such as in relation to salvage or recovery operations. Therefore § 924.5 (a)(2) has been appropriately modified. Finally, the Administrator felt it desirable to provide for the extension of the various time limits prescribed in § 924.8 for good cause shown. This has been done by the addition of a new paragraph (e).

There having been no other comments, and the Administrator being of the view that no additional changes in the regulations are necessary at this time, there are published herewith final regulations pertaining to the MONITOR Marine Sanctuary to become effective May 19, 1975.

15 CFR Part 924 is revised as follows:

Sec.

AUTHORITY: Secs. 302(f), 302(g), 303, Marine Protection, Research and Sanctuaries Act of 1972.

§ 924.1 Authority.

The Sanctuary has been designated by the Secretary of Commerce pursuant to the authority of section 302(a) of the Act. The following regulations are issued pursuant to the authorities of sections 302(f), 302(g) and 303 of the Act.

§ 924.2 Description of the Sanctuary.

The Sanctuary consists of a vertical water column in the Atlantic Ocean one mile in diameter extending from the surface to the seabed, the center of which is at 35°00'23" north latitude and 75°24'-32" west longitude.

§ 924.3 Activities prohibited within the Sanctuary.

Except as may be permitted by the Administrator, no person subject to the jurisdiction of the United States shall conduct, nor cause to be conducted, any of the following activities in the Sanctuary:

(a) anchoring in any manner, stopping, remaining, or drifting without power at any time;

(b) any type of subsurface salvage or recovery operation;

(c) any type of diving, whether by an individual or by a submersible;

(d) lowering below the surface of the water any grappling, suction, conveyor, dredging or wrecking device;

(e) detonation below the surface of the water of any explosive or explosive mechanism;

(f) seabed drilling or coring;

(g) lowering, laying, positioning or raising any type of seabed cable or cable-laying device;

(h) trawling; or

(i) discharging waste material into the water in violation of any Federal statute or regulation.

§ 924.4 Penalties for commission of prohibited acts.

Section 303 of the Act authorizes the assessment of a civil penalty of not more than $50,000 for each violation of any regulation issued pursuant to Title III of the Act, and further authorizes a proceeding *in rem* against any vessel used in violation of any such regulation. Details are set out in Subpart (D) of Part 922 of this Chapter (39 FR 23254, 23257, June 27, 1974). Subpart (D) is applicable to any instance of a violation of these regulations.

§ 924.5 Permitted activities.

Any person or entity may conduct in the Sanctuary any activity listed in § 924.3 of this Part if: (a) such activity is either (1) for the purpose of research related to the MONITOR, or (2) pertains to salvage or recovery operations in connection with an air or marine casualty; and (b) such person or entity is in possession of a valid permit issued by the Administrator authorizing the conduct of such activity; except that, no permit is required for the conduct of any activity immediately and urgently necessary for the protection of life, property or the environment.

§ 924.6 Permit procedures and criteria.

(a) Any person or entity who wishes to conduct in the Sanctuary an activity for which a permit is authorized by § 924.5 (hereafter a permitted activity) may apply in writing to the Administrator for a permit to conduct such activity citing this section as the basis for the application. Such application should be made to the Administrator, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Washington, D.C. 20230. Upon receipt of such application, the Administrator shall request, and such person or entity shall supply to the Administrator, such information and in such form as the Administrator may require to enable him to act upon the application.

(b) In considering whether to grant a permit for the conduct of a permitted activity for the purpose of research related to the MONITOR, the Secretary shall evaluate such matters as (1) the general professional and financial responsibility of the applicant; (2) the appropriateness of the research method(s) envisioned to the purpose(s) of the research; (3) the extent to which the conduct of any permitted activity may diminish the value of the MONITOR as a source of historic, cultural, aesthetic and/or maritime information; (4) the end value of the research envisioned; and (5) such other matters as the Administrator deems appropriate.

(c) In considering whether to grant a permit for the conduct of a permitted activity in the Sanctuary in relation to an air or marine casualty, the Administrator shall consider such matters as (1) the fitness of the applicant to do the work envisioned; (2) the necessity of conducting such activity; (3) the appropriateness of any activity envisioned to the purpose of the entry into the Sanctuary; (4) the extent to which the conduct of any such activity may diminish the value of the MONITOR as a source of historic, cultural, aesthetic and/or maritime information; and (5) such other matters as the Administrator deems appropriate.

(d) In considering any application submitted pursuant to this Section, the Administrator may seek and consider the views of any person or entity, within or outside of the Federal Government, as he deems appropriate; except that, he shall seek and consider the views of the Advisory Council on Historic Preservation.

(e) The Administrator may, in his discretion, grant a permit which has been applied for pursuant to this Section, in whole or in part, and subject to such condition(s) as he deems appropriate, except that the Administrator shall attach to any permit granted for research related to the MONITOR the condition that any information and/or artifact(s) obtained in the research shall be made available to the public. The Administrator may observe any activity permitted by this section; and/or may require the submission of one or more reports of the status or progress of such activity.

(f) A permit granted pursuant to this Section is nontransferable.

(g) The Administrator may amend, suspend or revoke a permit granted pursuant to this section, in whole or in part, temporarily or indefinitely, if, in his view, the permit holder (hereafter the Holder) has acted in violation of the terms of the permit; or the Administrator may do so for other good cause shown. Any such action shall be in writing to the Holder, and shall set forth the reason(s) for the action taken. Any Holder in relation to whom such action has been taken may appeal the action as provided in § 924.8 of this Part.

§ 924.7 Certification procedures.

Any Federal agency which, as of the effective date of these regulations, already has permitted, licensed or otherwise authorized any prohibited activity in the Sanctuary shall notify the Administrator of this fact in writing. The writing shall include a reasonably detailed description of such activity, the person(s) involved, the beginning and ending dates of such permission, the reason(s) and purpose(s) for same, and a description of the total area affected. The Administrator shall then decide whether the continuation of the permitted activity, in whole or in part, or subject to such condition(s) as he may deem appropriate, is consistent with the purposes of Title III of the Act and can be carried out within these regulations. He shall inform the Federal agency of his decision in these regards, and the reason(s) therefore, in writing. The decision of the Secretary made pursuant to this section shall be final action for the purpose of the Administrative Procedure Act.

§ 924.8 Appeals of administrative action.

(a) In any instance in which the Administrator, as regards a permit authorized by, or issued pursuant to, this Part: (1) denies a permit; (2) issues a permit embodying less authority than was requested; (3) conditions a permit in a manner unacceptable to the applicant; or (4) amends, suspends, or revokes a permit for a reason other than the violation of regulations issued under this Part, the applicant or the permit holder, as the case may be (hereafter the Appellant), may appeal the Administrator's action to the Secretary. In order to be considered by the Secretary, such appeal shall be in writing, shall state the action(s) appealed and the reason(s) therefore; and shall be submitted within 30 days of the action(s) by the Administrator to which the appeal is directed. The Appellant may request a hearing on the appeal.

(b) Upon receipt of an appeal authorized by this Section, the Secretary may request, and if he does, the Appellant shall provide, such additional information and in such form as the Secretary

may request in order to enable him to act upon the appeal. If the Appellant has not requested a hearing, the Secretary shall decide the appeal upon (1) the basis of the criteria set out in §§ 924.6 (b) or 924.6(c) of this part, as appropriate, (2) information relative to the application on file in NOAA, (3) information provided by the Appellant, and (4) such other considerations as he deems appropriate. He shall notify the Appellant of his decision, and the reason(s) therefore, in writing within 30 days of the date of his receipt of the appeal.

(c) If the Appellant has requested a hearing, the Secretary shall grant an informal hearing before a Hearing Officer designated for that purpose by the Secretary after first giving notice of the time, place, and subject matter of the hearing in the FEDERAL REGISTER. Such hearing shall be held no later than 30 days following the Secretary's receipt of the appeal. The Appellant and any interested person may appear personally or by counsel at the hearing, present evidence, cross-examine witnesses, offer argument and file a brief. Within 30 days of the last day of the hearing, the Hearing Officer shall recommend in writing a decision to the Secretary based upon the considerations outlined in paragraph (b) of this section and based upon the record made at the hearing.

(d) The Secretary may adopt the Hearing Officer's recommended decision, in whole or in part, or may reject or modify it. In any event, the Secretary shall notify the Appellant of his decision, and the reason(s) therefore, in writing within 15 days of his receipt of the recommended decision of the Hearing Officer. The Secretary's action, whether without or after a hearing, as the case may be, shall constitute final action for the purposes of the Administrative Procedure Act.

(e) Any time limit prescribed in this Section may be extended by the Secretary for good cause, either upon the Secretary's own motion and upon written notification to an Appellant stating the reason(s) therefore, or upon the written request of an Appellant to the Secretary stating the reason(s) therefore, except that no time limit may be extended more than 30 days.

R. L. CARNAHAN,
Acting Assistant Administrator for Administration.

[FR Doc.75-13009 Filed 5-16-75;8:45 am]

Appendix B: NOAA-Permitted Expeditions

NOAA-Permitted Expeditions to the MONITOR National Marine Sanctuary

R/V EASTWARD, June 9-10 and June 16, 1976

Sponsoring Agencies: National Science Foundation Grant to the Cooperative Oceanographic Program of Duke University Marine Laboratory.

Participants: MONITOR Research and Recovery Foundation, University of Delaware.

Purpose: To obtain data concerning the magnetic field and subbottom acoustic reflectors in the MONITOR National Marine Sanctuary, in conjunction with a geophysical of the Delaware continental shelf.

Description of Work: A total of eight crossings of the wreck were made using a Varian proton precession magnetometer during the two periods of research. Acoustic reflection measurements of the wreck site were made utilizing an Edo-western subbottom profiler with a hull-mounted 3.5 kHz transducer.

Conclusions: From the magnetic data collected, researchers were able to isolate certain magnetic characteristics of the MONITOR and their effect on the regional magnetic field. It was also concluded that no fragments of ferrous metal larger than 3m on a side exist further than 100m from the wreck. The acoustic data indicated the general direction of slope of the subbottom reflectors in the area, and the MONITOR's relative position to these reflectors.

R/V CAPE HENLOPEN, April 4-8, 1977

Sponsoring Agencies: Exxon Education Foundation, University of Delaware.

Participants: MONITOR Research and Recovery Foundation, National Oceanic and Atmospheric Administration, University of Delaware.

Purpose: To obtain measurements of the near-bottom currents, to take coring samples of the sediments beneath the wreck, and to conduct horizontal television observations of the wreck.

Description of Work: A Braincon current meter was installed just outside the MONITOR National Marine Sanctuary to measure the near-bottom currents during the period of the expedition. An 18-foot core was taken southeast of the remains of the MONITOR using a standard 6m Ewing-type piston core. Finally, a television camera was lowered to the site enabling a horizontal view of the forward section of the wreck.

Conclusions: From this work the researchers were able to make a number of observations concerning the strength and direction of the near-bottom currents in the MONITOR National Marine Sanctuary, the type and condition of the sediments beneath the wreck and what effect these factors will have in future work and recovery operations at the site. In addition, the television cameras provided further information on the structure and condition of the wreck.

R/V JOHNSON and R/V SEA DIVER, July 17-August 2, 1977

Sponsoring Agencies: National Oceanic and Atmospheric Administration, Harbor Branch Foundation.

Participants: National Oceanic and Atmospheric Administration, Harbor Branch Foundation, North Carolina Division of Archives and History, United States Navy.

Purpose: To conduct a photogrammetric survey of the MONITOR and the controlled recovery of material from the MONITOR site.

Description of Work: Preliminary work was carried out using side-scan sonar on the wreck and then searching the surrounding area with this sonar one-half mile in all directions to detect any protrusions from the bottom. No such protrusions were found. A remotely operated vehicle, CORD, equipped with a television camera, was sent to the wreck of the MONITOR and closed-circuit television pictures were transmitted to the surface vessels. Visibility was quite good, in excess of 100 feet, and the CORD system allowed complete scanning of the wreck from bottom to stem. The photogrammetric survey was conducted using two submersibles, JOHNSON-SEA-LINK I and JOHNSON-SEA-LINK II, and divers who were transported to and from the site in the submersibles. Three passes were made over the wreck for the horizontal and oblique stereo photography. Two of these passes were made with black-and-white film and one with color film. The final operation involved the recovery of an iron hull plate that had been disturbed when a camera system had fouled the wreck during the August 1973 EASTWARD expedition. The location of this plate had been well documented during previous expeditions as well as during the photogrammetric survey of the wreck. The camera system which fouled the plate and was subsequently lost was also recovered at this time. In addition, a brass signal lantern that had been discovered lying on the sea floor 40 feet north of the turret was recovered to prevent its loss or disturbance.

Conclusions: The detailed investigation of the closed-circuit television and photogrammetric data coupled with the analysis of the hull plate and brass lantern will greatly add to what is already known concerning the extent and structural integrity of the remains of the MONITOR. From this information it will be possible to more reasonable assess the direction of future work at the site, particularly in planning for any further recovery and preservation of material from the site. This expedition also allowed the first on-site inspection of the wreck by divers and the crews of the submersibles. Their observations have provided insight into the structure and condition of the MONITOR's armor belt, turret, deck, and machinery that was not possible before with the use of remote camera systems.

R/V CALYPSO, June 9-14, 1979

Sponsoring Agencies: Cousteau Society.

Participants: Cousteau Society.

Purpose: To photograph the MONITOR with movie film to be used as a segment in a one-hour television special on "Historical Wrecks."

Description of Work: Divers using standard scuba equipment descended 210 feet to the wreck, staying 10 minutes at that depth and then ascending at given rates and decompressing for approximately 45 minutes at 30 feet, 20 feet, and 10 feet. Two buoys were positioned near the wreck: one buoy (B1) 80 meters south of the wreck and another (B2) 100 meters north. Two film crews of four divers each moved over the wreck, drifting with the prevailing current from buoy to buoy, filming as they passed. Approximately 12 minutes of film were exposed. However, film quality was somewhat impaired by poor visibility and low light level.

Conclusions: The methods used by the Cousteau Society were novel in several respects: use of scuba equipment with air as a breathing medium, deployment of eight divers at one time, in-water decompression of divers and use of satellite navigation system and radar for positioning. These procedures could have been accomplished only by a team with as much experience as Cousteau's divers. Photographic coverage of the wreck provided additional information on the condition of the wreck as well as environmental conditions at the site.

R/V JOHNSON, August 1-26, 1979

Sponsoring Agencies: National Oceanic and Atmospheric Administration, North Carolina Division of Archives and History, Harbor Branch Foundation.

Participants: National Oceanic and Atmospheric Administration, North Carolina Division of Archives and History, Harbor Branch Foundation.

Purpose: To establish reference points adjacent to the wreck, test the structural components of the MONITOR, conduct a test excavation in the forward portion of the wreck within the hull, and undertake a general reconnaissance of the site by diver observations and hand-held photography.

Description of Work: Three underwater archaeologists, supported by a team of 20 technicians, divers, and crew members, conducted 49 dives, during 36 of which the divers left the submersible, JOHNSON-SEA-LINK I for a working dive. Breathing a gas mixture of 12 percent oxygen and 88 percent helium, the divers spent, per dive, approximately 60 minutes on the bottom and about 4 1/2 hours in decompression upon return to the support vessel R/V JOHNSON. From the excavations, the divers recovered 106 objects of historic and scientific significance representing a broad range of materials including brass, iron, leather, glass, and ceramics. The artifacts have undergone conservation analysis and will be part of future exhibits on the MONITOR.

Conclusions: Data generated by the research project afforded valuable insight into the archaeological and engineering problems presented by this and other deep-water archaeological sites. This information has significantly broadened the knowledge upon which sanctuary management decisions will be made.

R/V JOHNSON, August 1983

Sponsoring Agencies: National Oceanic and Atmospheric Administration.

Participants: National Oceanic and Atmospheric Administration, East Carolina University, Harbor Branch Foundation.

Purpose: To establish reference points adjacent to the wreck, test the structural components of the MONITOR, adjacent to the turret, undertake a general reconnaissance of the site by diver observations and hand-held photography, and locate and recover the MONITOR's anchor.

Description of Work: Three underwater archaeologists, supported by a team of 20 technicians, divers, and crew members, were prepared to carry out the scientific objectives for the expedition. However, poor surface and/or bottom conditions precluded working at the wreck. The unique four-fluked anchor, which was located 495 feet south-southwest of the bow of the MONITOR on a bearing of 225 degrees, was located, excavated, and recovered. It underwent conservation for nearly three years before being made available for display.

Conclusions: The anchor was in remarkably good condition. The treatment and length of time necessary to conserve it provided valuable insight into the problems of conserving large iron artifacts from the marine environment.

OSV ANDERSON, August 2-11, 1985

Sponsoring Agencies: National Oceanic and Atmospheric Administration.

Participants: National Oceanic and Atmospheric Administration, National Trust for Historic Preservation, Eastport International.

Purpose: To install a permanent acoustic navigation system to gather data on the bathymetry, subbottom profile, and magnetic characteristics of the sanctuary, and to undertake side-scan sonar imaging of the MONITOR.

Description of Work: All scientific objectives were completed. At the conclusion of on-site operations, two recording current meters were left on the bottom to collect long-term environmental data on currents, temperatures, and salinities in the water surrounding the wreck. One was also equipped to measure optical transmissivity in preparation for future photographic efforts.

Conclusions: The data generated by the 1985 expedition, in conjunction with the environmental data being collected at the site, will serve as a basis for future on-site research.

USNS APACHE (TATF), May 25 - June 9, 1987

Sponsoring Agencies: National Oceanic and Atmospheric Administration.

Participants: National Oceanic and Atmospheric Administration, U.S. Navy, Eastport International.

Purpose: To conduct corrosion studies and visual and photographic surveys of the wreck and the adjacent area; a structural survey of the wreck; a three-dimensional acoustic survey of the wreck and adjacent area; and to determine the extent of the site and establish site boundaries.

Description of Work: Using the USNS APACHE as the work platform and the remotely operated vehicle DEEP DRONE as the delivery system, the scientific objectives were carried out according to a comprehensive operations plan prepared prior to the expedition. The corrosion studies, structural and intensive surface surveys, and three-dimensional sonar survey were all carried out

along predetermined track lines controlled by a sophisticated navigation system developed for deep ocean search.

Conclusions: This expedition generated much new data about corrosion activities at the site as well as an extensive record of the site through controlled photography. The data will be used by NOAA to assist in assessing future management options.

R/V SEWARD JOHNSON, June 1-2, 1990

Sponsoring Agencies: National Oceanic and Atmospheric Administration.

Participants: National Oceanic and Atmospheric Administration, Harbor Branch Foundation.

Purpose: To assess and document the wreck through observation and controlled photography, to place the first of four permanent markers at the site, and to initiate an annual site reconnaissance.

Description of Work: Using the four-man submersible JOHNSON-SEA-LINK I as the delivery system, the scientific team was able to observe the wreck first-hand and to document the wreck through controlled still and video photography. The submersible was "flown" along predetermined track lines to permit scientific observations of the wreck and to provide sufficient photographic coverage and overlap for later study and analysis.

Conclusions: A number of changes in the wreck were observed and documented, particularly in the area aft of the midships bulkhead. Good visibility at the site—in excess of 175 feet—provided excellent opportunities for first-hand assessment by the scientific team and resulted in good photographic documentation of the wreck. Data from this reconnaissance was used to refine objectives for the reconnaissance scheduled for July 1990.

M/V QUIET WATERS, June 30 - July 11, 1990

Sponsoring Agencies: Private funding.

Participants: Individual scuba divers under the direction of Mr. Gary Gentile.

Purpose: To obtain photographs and a video of the wreck.

Description of Work: Still and video documentation of the wreck was accomplished. A side-scan sonar survey was done prior to the diving phase of the expedition.

Conclusions: Air diving to the wreck is a viable method for visual recording of certain aspects of the wreck.

M/V SEA FOX, June 5-13, 18-22, 1990

Sponsoring Agencies: Private funding.

Participants: Individual scuba divers under the direction of Mr. Roderick A. Farb.

Purpose: To obtain photographs and a video of the wreck.

Description of the Work: Cinematography, still photography, and videography of the wreck.

Conclusions: The expedition made high-quality images of the site using hand-held cameras.

R/V EDWIN LINK, July 25-27, 1990

Sponsoring Agencies: National Oceanic and Atmospheric Administration.

Participants: National Oceanic and Atmospheric Administration, Harbor Branch Foundation.

Purpose: To assess and document the wreck through observation and controlled photography, to place the remaining three markers at the site, to assess the impact of several diving expeditions to the site during June and July 1990, to place the remaining three monuments; and to recover a glass lamp globe or "chimney" located during the June 1990 reconnaissance.

Description of Work: Using the four-man submersible JOHNSON-SEA-LINK II as the delivery system, the scientific team continued observing and documenting the wreck through controlled still and video photography. Areas observed to have undergone changes since the 1987 expedition were documented with particular thoroughness. As with the June 1-2, 1990 reconnaissance, the submersible was "flown" along predetermined track lines to permit scientific observations of the wreck and to provide sufficient photographic coverage and overlap for later study and analysis. Unfortunately poor visibility at the site precluded all observations or photography of the wreck for much of the first two days of the reconnaissance. However, a complete reconnaissance was made on the third day and the glass globe was recovered. The remaining three monuments were placed at predetermined points off the bow and stern of the wreck. A recording thermograph was placed on one of the monuments to record water temperature over the next year.

Conclusions: Further study of areas noted during June 1990 to have undergone changes since the 1987 expedition confirmed that the area of the wreck aft of the midships bulkhead has suffered significant damage. Findings of the June and July 1990 reconnaissance expeditions serve to emphasize the need for an annual site assessment by scientists.

R/V EDWIN LINK, June 20, 1991

Sponsoring Agencies: National Oceanic and Atmospheric Administration

Participants: National Oceanic and Atmospheric Administration, Harbor Branch Foundation.

Purpose: To perform an emergency inspection of suspected site damage due to unauthorized anchoring.

Description of the Work: Using the four-man submersible JOHNSON-SEA-LINK I as the delivery system, the scientific team carried out a visual inspection of the wreck and documented the wreck through controlled still and video photography. A recording thermograph, placed at the site during the July 1990 reconnaissance, was recovered.

Conclusions: Signs of recent impact to the face of the turret and the stern were documented, along with changes in the positions of the skeg and propeller.

M/V SEA FOX, August 31 - September 7, 1991

Sponsoring Agencies: Private funding.

Participants: Individual scuba divers under the direction of Mr. Roderick A. Farb.

Purpose: To obtain photographs and a video of the stern and engineering spaces to be used in computer-aided mapping and measurement of the wreck.

Description of the Work: Limited photography and videography of the wreck.

Conclusions: Current and visibility limited the effectiveness of the free-swimming scuba divers. Limited results were obtained.

R/V EDWIN LINK, October 4-5, 1991

Sponsoring Agencies: National Oceanic and Atmospheric Administration.

Participants: National Oceanic and Atmospheric Administration, Harbor Branch Foundation.

Purpose: To assess and document the wreck through observation and controlled photography.

Description of Work: Using the four-man submersible JOHNSON-SEA-LINK I as the delivery system, the scientific team continued observing and documenting the wreck through controlled still and video photography. Areas observed to have undergone changes since the 1991 expedition were documented. As with previous reconnaissances, the submersible was "flown" along predetermined track lines to permit scientific observations and to provide sufficient photographic coverage and overlap for later study and analysis. A recording thermograph was placed on one of the monuments to record water temperature for one year. Acoustic triangulation of the monument positions using a short-range pinger system was carried out.

Conclusions: Changes at the stern had occurred since the June 1991 reconnaissance. Most obvious was a separation in the lower hull just forward of where the skeg and propeller shaft entered the structure.

Appendix C: Cooperative Agreement

Cooperative Agreement between the National Oceanic and Atmospheric Administration and the Mariners' Museum

I. PURPOSE

This Cooperative Agreement (hereinafter Agreement) between the Marine and Estuarine Management Division [now called the Sanctuaries and Reserves Division], Office of Ocean and Coastal Resource Management, National Oceanic and Atmospheric Administration (hereinafter NOAA) and the Mariners' Museum of Newport News, Virginia (hereinafter Museum) establishes and sets forth the terms and conditions between NOAA and the Museum for management of the MONITOR National Collection of Artifacts and Papers (hereinafter National Collection). This Agreement is required under a Memorandum of Agreement (MOA) signed on July 13, 1987 between NOAA and the Museum and incorporated herein as Attachment A.

II. REFERENCES AND AUTHORITY

The MONITOR National Marine Sanctuary was designated by the Secretary of Commerce on January 30, 1975, pursuant to Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, 16 U.S.C. 1431 *et. seq.* NOAA is responsible for administering the National Marine Sanctuary Program and the MONITOR National Marine Sanctuary.

The Mariners' Museum was designated as Principal Museum for the National Collection by NOAA in accordance with the request for proposals published in the *Federal Register* on Thursday, September 4, 1986, and incorporated herein as Attachment B.

III. RESPONSIBILITIES

1. NOAA

In accordance with the MOA, NOAA will provide support for the services of the Mariners' Museum subject to annual appropriations, Federal law and NOAA's approval. NOAA shall:

a. Deliver to the Museum all MONITOR National Marine Sanctuary artifacts, papers, and records;

b. Provide $50,000, distributed by subagreements, to support base services and initiate any special projects agreed to by both parties during the first year of this Agreement;

c. Designate a field manager for the MONITOR National Marine Sanctuary who will assist the Museum in implementing this Agreement and related subagreements.

2. MARINERS' MUSEUM

In accordance with the MOA, the Museum will manage the MONITOR Collection including curation, conservation, interpretation and loaning of the collection. The Museum shall:

a. Maintain archives, a research library, and a conservation facility;

b. Develop a permanent and traveling exhibit, and assist other participating museums in the development of exhibits and interpretive displays;

c. Manage the loan of portions of the National Collection to other qualified repositories for research, interpretation or educational purposes;

d. Maintain the National Collection under environmentally and physically secure conditions within storage, exhibition, laboratory and study areas;

e. Inspect the National Collection on a regular basis and make recommendations as to necessary maintenance conservation measures;

f. Adequately insure the National Collection from theft or other loss;

g. Catalog all known MONITOR-related materials in both private and public collections;

h. Assist and advise NOAA regarding the future planning of the MONITOR National Marine Sanctuary, the development of the National Collection, and the implementation [of a] master plan for the sanctuary;

i. Comply with relevant Federal regulations regarding the curation of Federally owned archaeological collections;

j. Provide other services relating to the MONITOR National Marine Sanctuary as agreed to by both parties to this Agreement. The scope of these other services shall be defined in subagreements.

IV. PERIOD

This Agreement shall remain in effect for a period of ten years from the latter date of execution, unless extended or terminated prior to its expiration. Either the Mariners' Museum or NOAA may terminate this Agreement at any time during the term or any extension of the term by providing written notice to the other party. Termination takes effect six months after transmittal or written notice.

V. SUBAGREEMENTS

Methods of payments, task descriptions and objectives, statements of party responsibilities, budget, and schedules for cooperative projects will be specified in supplemental sub-agreements to be attached to and made a part of this Agreement and to be executed by the Key Officials.

VI. KEY OFFICIALS

Museum: Mr. William D. Wilkinson, Executive Director, Mariners' Museum, or successor.

NOAA: Mr. Donald E. Critchfield, Acting Director, Office of Ocean and Coastal Resource Management, National Ocean Service, NOAA, or successor.

Specific project proposals and their financial budgets approved by the Key Officials and made part of this Agreement by signed subagreements are considered to be binding contracts. Changes in objectives, budgets, scopes of work, and principal personnel must have prior written approval of both Key Officials. Prior to executing a subagreement under this Agreement, the Key Officials shall secure all necessary prior approvals required by NOAA and the Museum.

VII. ADMINISTRATIVE PROVISIONS

This Agreement incorporates by reference the OMB Circulars Nos. A-21, A-34, A-40, A-73, A-87, A-88, A-105, A-110, and A-122. The Mariners' Museum and NOAA agree to comply with provisions therein.

VIII. MISCELLANEOUS PROVISIONS

This Agreement constitutes the full, complete, and entire agreement between the parties hereto. No modification or amendment shall be binding on either party, except as provided for in parts IV and V with respect to sub-agreements, unless such modification or amendment shall be in writing, executed in duplicate by both parties hereto, attached to this Agreement, and incorporated in, and by reference made a part of this Agreement.

IN WITNESS HEREOF, the Mariners' Museum and NOAA have executed this Agreement on the dates written herein.

THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

(signed)
By:_____
Donald E. Critchfield
Acting Director, Office of Ocean and Coastal Resource Management

September 10, 1989
_____
Date

MARINERS' MUSEUM

(signed)
By: _____
William D. Wilkinson
Executive Director,
Mariners' Museum

October 4, 1989
_____
Date

Appendix D: Mariners' Museum: Use of the Collection

The Mariners' Museum Research Library Monitor Collection

The MONITOR Collection contains original papers from government agencies and private individuals involved in MONITOR research and administration from the late 1960s to the present and research data, including video, slides, and photographs of the wreck from 1973 to the present. Miscellaneous records relative to searches for the vessel were carried out in the 1960s. The Collection contains copies of historical correspondence, documents and plans of the MONITOR, the originals of which are housed in other repositories, including the National Archives. It also contains copies of historical documents from private collections. Identification and acquisition of additional material for the Collection is ongoing.

The MONITOR Collection is a Federal collection under the ultimate jurisdiction of the National Archives. The Mariners' Museum, in its capacity as Principal Museum for the MONITOR National Marine Sanctuary, has been designated as a regional repository for curatorship of this important collection.

SCHEDULE FOR USE OF THE COLLECTION

The Collection is open to the public Monday through Friday from 9:00 AM to 4:00 PM. It is closed Saturdays, Sundays, and holidays. Use of the MONITOR Collection will be by prearranged appointment with the Education Coordinator for the MONITOR National Marine Sanctuary who can be contacted as follows:

Dina B. Hill, Education Coordinator
MONITOR National Marine Sanctuary
Box 147
Rescue, VA 23424
(804-599-3122)

RESEARCHERS ARE ASKED TO OBSERVE THE FOLLOWING REGULATIONS :

All brief cases and packages must be left at the front desk.

Register. Please print your name and full address. This must be done each day.

The areas in which the MONITOR Collection is housed are closed to the public. A staff member will retrieve material for researchers.

Materials in the Collection do not circulate.

Limited copying is available and will be done by a staff member. Each item requested is considered individually. Books and bound manuscript volumes may be copied, depending upon the condition of binding and pages. Depending on the number of pages to be copied, exceptions will be considered. We reserve the right to limit the number of pages copied. In order to prolong the life of materials in

the Collection, fragile and brittle materials will not be copied, and oversized materials that do not fit comfortably on the copier will not be copied.

Unauthorized photographing and tracing of plans are not permitted. Copies of plans and prints may be ordered.

Please note: With the exception of the paper files, original material will not be made available for research. All research, including analysis of data and assessment of the wreck, will be carried out from first-generation copies. This includes photographs and slides as well as data recorded on video and magnetic media. All copies made at the request of researchers will be produced from these first-generation copies. No exceptions will be made.

Appendix E: Permit Guidelines: Archaeological Research

Guidelines for Submitting Applications for National Marine Sanctuary Archaeological Research Permits

A. BACKGROUND

National Marine Sanctuaries are recognized as resource areas of national significance due to their conservation, recreational, ecological, historical, research, educational, or esthetic qualities. The Sanctuaries and Reserves Division (SRD), formerly Marine and Estuarine Management Division, of the National Oceanic and Atmospheric Administration (NOAA) administers the National Marine Sanctuary Program (Program).

The Assistant Administrator for Ocean Services and Coastal Zone Management, or his/her designee, may issue permits to a person subject to appropriate terms and conditions, for activities otherwise prohibited by Sanctuary regulations related to: (1) research to enhance scientific understanding of the Sanctuary environment and resources or to improve management decisionmaking; (2) education to further public awareness, understanding, and wise use of the Sanctuary environment and resources; or (3) modern salvage or recovery operations.

The guidelines presented herein describe the Program permitting process for conducting archæological research on historical and cultural resources in National Marine Sanctuaries. These guidelines are in accord with Title III of the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, 16 U.S.C. S 1431 *et seq* (Act), and consistent with the Uniform Regulations for the Protection of Archæological Resources, 43 C.F.R. Part 7, which establish basic government-wide standards for the issuance of permits for archæological research, including the authorized excavation and/or removal of archæological resources, on public lands or Indian lands. Although National Marine Sanctuaries are not public lands or Indian lands, the concerns underlying the Uniform Regulations are shared by the Program.

Permits to conduct archæological research involving site disturbance will only be issued after full compliance with SRD/NOAA's responsibilities as a Federal agency under the Federal archæological program as stipulated under the National Historic Preservation Act, as amended, 16. U.S.C. s 470 *et seq* (NHPA), and the National Environmental Policy Act, as amended, 42 U.S.C. S 4321 *et seq* (NEPA). Should the proposed archæological research involve site disturbance the applicant(s) must consult prior to the submission of an application for a permit for archæological research:

- the Advisory Council for Historic Preservation for procedures and requirements regarding the Section 106 Review Process under NHPA for sites included in or eligible for inclusion in the National Register of Historic Places.
- NEPA
- the Secretary of the Interior's *Standards and Guidelines for Archæology and Historic Preservation*, 48 *Fed. Reg.* 44716, to become familiar with recommended preservation procedures and NOAA's responsibilities as a Federal agency under the Federal archæological program. (See Attachment I for applicable references and addresses.)

B. APPLICATION CONTENTS

1. Cover Sheet: The cover sheet must identify: (1) name of the National Marine Sanctuary in which the proposed activity would take place; (2) title of project: (3) name, address, telephone number, and affiliation of applicant; (4) name, address, affiliation, and relationship of colleagues to be covered by the permit; (5) project duration; (6) funding source; (7) key words; and (8) signature of applicant.

*2. **Project Summary:*** a 250-word (maximum) summary must include a brief statement of research objectives, scientific methods to be used, and significance of the proposed work to a particular Sanctuary or to the Program. The summary must be suitable for use in the public press.

*3. **Technical Information:*** This includes clear, concise, and complete statements of the following:

*a. **Objectives.*** State the objectives of the study.

*b. **Project Significance.*** Discuss significant previous work in the area of interest and how the proposed effort would enhance or contribute to improving the state of knowledge. Explain why the proposed effort should be performed in the Sanctuary and its potential benefits to the Sanctuary.

*c. **Methods.*** Describe the tasks required to accomplish the project's objectives. Provide adequate description of field and laboratory methods and procedures and time of performance. Describe the rationale for selecting the proposed methods over any alternative methods.

If site disturbance is proposed, indicate the type, quantity, and method of recovery, and identify the proposed repository to conserve, curate, and interpret the resulting archæological collection. The applicant must submit sufficient documentation demonstrating that required technical resources, including existing facilities and funding commitment, will be made available to the project.

For archæological research including survey and excavation, the application must include a research design that describes (1) the archæological theory and methods to be employed: (2) the problems toward which the research will be directed; and (3) the ways in which researchers are seeking to answer them.

Provide a map showing study location(s) and a description of the archæological sites of particular concern. Indicate where the laboratory analyses and conservation will be conducted, if applicable, and submit adequate documentation to demonstrate sufficient technical and fiscal resources.

*d. **Environmental Consequences.*** Discuss the environmental consequence of conducting an otherwise prohibited activity and indicate whether the activity could be conducted outside the Sanctuary and accomplish the project's objectives.

For archæological research involving site disturbance submit the information necessary to prepare the appropriate environmental impact document for the proposed activity in accordance with NEPA (See Attachment I).

e. ***Compliance with Federal Archæological Program.*** It is the responsibility of the applicant to submit suitable documentation to cooperate with SRD/NOAA so that it may meet its responsibilities as a Federal agency under Sections 106 and 110 of NHPA, NEPA, and applicable Federal regulations of the Federal archæological program.

f. ***Treatment of Results.*** Describe the nature and extent of anticipated results. Indicate how the results will be treated (e.g., published in a reference journal, incorporated into academic curriculum, used in management decisionmaking, published in the public press, etc.)

g. ***Personnel.*** For the conduct of archæological research, including survey and excavation, identify the principal investigator as well as the research team and the specific task assignments of team members. Provide qualifications and evidence of the ability of each team member to perform the assigned tasks, consistent with or equivalent to the minimum standards of the Uniform Regulations for the Protection of Archæological Resources, 43 C.F.R. Part 7, and the *Secretary of Interior's Standards and Guidelines for Archæology and Historic Preservation.* Only those persons listed on the permit will be allowed to participate in permitted activities.

For the conduct of archæological research involving site disturbance, as much emphasis will be placed on the qualifications, related professional experience, and proposed technical approach of the proposed marine conservator and the facilities of the proposed repository in which any resultant archæological collection will be deposited as on the qualifications, related professional experience, and research design of the archæologist proposed as the principal investigator researcher.

Each applicant must also provide the name and address of the proposed conservation facility with suitable documentation and evidence of the ability to perform the required tasks certified by an authorized official of the proposed repository responsible to ensure that the Federally owned or administered archæological collection is accessioned, catalogued, maintained, preserved, and stored in accordance with professional standards for collection management and Federal statutes on collections (36 C.F.R. 79).

4. Supporting Information

a. ***Financial Support.*** Provide contract number, performance period, and name of sponsoring agency, if any.

If none, provide sufficient data to substantiate the fiscal capability to complete the proposed research. If site disturbance is proposed, financial data must address the resources necessary for the conservation, curation, and interpretation of the resulting archæological collection.

b. ***Coordination with Research in Progress or Proposed.*** SRD encourages coordination and cost-sharing with other investigators to enhance scientific capabilities and avoid unnecessary duplication of effort. Applicants should include a description of these efforts, where applicable.

5. References. Cite only those used in the text of the proposal.

C. REQUESTS FOR SANCTUARY SUPPORT SERVICES

SRD has limited on-site Sanctuary personnel, facilities and equipment that may be used on loan or lease to support research under special circumstances. Requests for support must accompany the permit application and include the following information: (1) type of support requested; (2) justification; (3) dates and length of use; and (4) alternative plans if support is not available.

D. REQUESTS FOR AMENDMENTS OR EXTENSIONS TO ACTIVE PERMITS

1. Requests for amendments to active permits (e.g., change in study design or other form of amendment) should conform to these guidelines. All information needed to make an objective evaluation of the amendment should be included in the request. Reference to the original application should also be included.

2. Persons desiring to continue research activities in the Sanctuary must reapply for an extension of their current permit before it expires. Reference to the original application may be given in lieu of a new application, provided the scope of work does not change significantly.

E. SUBMISSION OF REQUESTS FOR PERMITS

Requests for permits should be submitted in five (5) copies at least ninety (90) days in advance of the requested effective date to allow sufficient time for evaluation and processing. In proven emergency situations, exceptions to this requirement may be considered.

Requests for permits should be addressed to:

Chief
Sanctuaries and Reserves Division
Office of Ocean and Coastal Resources Management
1825 Connecticut Avenue, N.W., Suite 714
Washington, D.C. 20235

F. EVALUATION OF PERMIT REQUESTS

Permit applications for archæological research are reviewed for completeness, compliance with Program policies and adherence to these guidelines. Incomplete applications are returned to the applicant for clarification. Complete applications are assigned tracking numbers, and reviewed by inter-office program officials, on-site Sanctuary personnel, and, where necessary, outside experts. Applications are judged on the basis of:

1. relevance or importance to Sanctuary;

2. archæological merit;

3. appropriateness and environmental consequences of technical approach;

4. whether the proposed effort should be conducted outside the Sanctuary; and

5. qualifications of the applicants.

When the archæological research involves site disturbance, a site inspection of the proposed repository may be necessary to determine adequately its technical capability. In the event that a site inspection of the proposed repository is determined necessary by SRD/NOAA, the "American Association of Museums On-Site Evaluation Checklist", in *Professional Standards for Museum Accreditation* (see Attachment I), will be used as the uniform standard for evaluation.

If the proposed archæological research involves diving or the use of submersibles and if such activities require a permit under the applicable Sanctuary regulations, the application may be reviewed by the NOAA Diving Coordinator in accordance with the NOAA Diving Regulation, NOAA Directive 64-23, Nov. 30, 1983, prior to the issuance of a permit.

G. CONDITONS OF PERMITS

Based on the findings of the evaluation, SRD recommends an appropriate action to the Assistance Administrator or his/her designee. If approved, the Assistant Administrator or his/her designee will issue the permit. If denied, applicants are notified of the reason for denial.

Permit holders must counter-sign the permit and return copies to SRD and on-site Sanctuary personnel prior to conducting permitted activities in the Sanctuary. A NOAA-SRD research flag must be displayed by the permit holder while conducting the permitted activity. This requirement not only ensures that Sanctuary personnel are aware of permitted activities, but also alerts other Sanctuary users that research is in progress.

Permits must be carried aboard research vessels and made available upon request for inspection by Sanctuary personnel or law enforcement officials.

Only persons named in the permit may participate in permitted activities. Permits and research flags are non-transferrable. Permit holders must abide by all provisions set forth in the permit as well as applicable Sanctuary regulations. Applications for Sanctuary permits are incorporated into the conditions of the permit. Permitted activities must be conducted with adequate safeguards for the environment. Insofar as possible, the environment must be returned to the condition which existed before the activity occurred.

Upon completion of permitted activities, the permit holder is required to submit to SRD a full project report summarizing the results of permitted research. A cruise log, listing days spent in the Sanctuary, activities pursued and approximate positions should be included. Project reports are used in Sanctuary interpretive programs and visitor use assessments.

The Assistant Administrator or his/her designee may amend, suspend, or revoke a permit granted pursuant to these guidelines and Sanctuary regulations, in whole or in part, temporarily or indefinitely, if in his/her view the permit holder(s) has acted in violation of the terms of the permit or of applicable Sanctuary regulations, or for other good cause shown. Any such action will be communicated in writing to the permit holder and will set forth the reason for the action taken. The permit holder may appeal the action as provided in the applicable Sanctuary regulations.

H. MONITORING OF PERFORMANCE

Permitted activities will be monitored to ensure compliance with the conditions of the permit. SRD on-site Sanctuary personnel, or other designated authorities, may periodically assess work in progress by visiting the study location and observing any activity allowed by the permit or by reviewing any required reports. The discovery of any potential irregularities in performance under the permit will be promptly reported and appropriate action taken. Permitted activities will be evaluated and the findings will be used to evaluate future applications.

I. FURTHER INFORMATION

For further information on the National Marine Sanctuary Program, write or call the Sanctuaries and Reserves Division or the Sanctuary contacts listed below:

Sanctuaries & Reserves Div. Headquarters

Michael Crosby
Chief Scientist and Research Coordinator
NOAA/Sanctuaries and Reserves Division
1825 Connecticut Ave. NW, Ste. 714
Washington, DC 20235
(202) 606-4126

Ervan Garrison
Marine Archæologist
NOAA/Sanctuaries and Reserves Division
1825 Connecticut Ave., NW, Ste. 714
Washington, DC 20235
(202) 606-4126

Channel Islands National Marine Sanctuary

LCDR Steve Jameson, Manager
NOAA/Channel Islands National Marine Sanctuary
735 State St.
Santa Barbara, CA 93101
(805) 966-7107

Cordell Bank National Marine Sanctuary

Ed Ueber, Manager
NOAA/Cordell Bank National Marine Sanctuary
Fort Mason, Bldg. #201
San Francisco, CA 94123
(415) 556-3509

Fagatele Bay National Marine Sanctuary

Nancy Daschbach, Manager
NOAA/Fagatele Bay National Marine Sanctuary
P.O. Box 4318
Pago Pago, American Samoa 96799
(684) 633-5155

Florida Keys National Marine Sanctuary

Billy Causey, Designation Manager
NOAA/Florida Keys National Marine Sanctuary
9499 Overseas Hwy.
Marathon, FL 33050
(305) 743-2437

Flower Garden Banks National Marine Sanctuary

Stephen Gittings, Manager
NOAA/Flower Garden Banks National Marine Sanctuary
c/o Texas A&M Univ. Sea Grant Program
1716 Briarcrest Dr., Ste. 702
Bryant, TX 77802
(409) 847-9296

Gray's Reef National Marine Sanctuary

Reed Bohne, Manager
NOAA/Gray's Reef National Marine Sanctuary
Univ. of Georgia Marine Extension Service
P.O. Box 13687
Savannah, GA 31416
(912) 598-2496

Gulf of the Farallones National Marine Sanctuary

Ed Ueber, Manager
NOAA/Gulf of the Farallones National Marine Sanctuary
Fort Mason, Bldg. #201
San Francisco, CA 94123
(415) 556-3509

Key Largo National Marine Sanctuary

LCDR Alan Bunn, Manager
NOAA/Key Largo National Marine Sanctuary
P.O. Box 1083
Key Largo, FL 33037
(305) 451-1644

Looe Key National Marine Sanctuary

George Schmahl, Manager
NOAA/Looe Key National Marine Sanctuary
c/o Bahia Honda State Recreation Area
Rte. 1, Box 782
Big Pine Key, FL 33043
(305) 872-4039

MONITOR National Marine Sanctuary

John Broadwater, Manager
NOAA/MONITOR National Marine Sanctuary
Atlantic Marine Center
439 W. York St.
Norfolk, VA 23508
(804) 441-6469

Attachment 1: References for Submission of Permit Application to Conduct Archaeological Research in National Marine Sanctuaries

A. National Historic Preservation Act of 1966, as amended (NHPA), 16 U.S.C. 470 et seq.

1. 16 CFR Part 800, Protection of Historic Properties, published in the *Federal Register*, September 2, 1986 (51 FR 31115). These regulations govern the Section 106 review process established by the NHPA.

References

a. 36 CFR Part 800: Protection of Historic Properties, Advisory Council on Historic Preservation, Effective October 1, 1986.

b. *Section 106, Step-by-Step*, Advisory Council on Historic Preservation, Issued October 1985.

Available from:

Advisory Council on Historic Preservation
The Old Post Office Building
1100 Pennsylvania Avenue, N.W., #809
Washington, D.C. 20004

B. Archæological Resources Protection Act of 1979, as amended (ARPA), 16 U.S.C. 470aa et seq.

1. Uniform Regulations, ARPA, 43 CFR Part 7. These regulations establish basic government-wide standards for the issuance of permits for archæological research, including the authorized excavation and/or removal of archæological resources on public lands or Indian lands.

C. ***Secretary of the Interior's Standards and Guidelines for Archæology and Historic Preservation,*** 48 FR 44716. This publication establishes standards for the preservation planning process with guidelines on implementation.

For additional information or consultation, contact:

Departmental Consulting Archæologist
National Park Service
U.S. Department of the Interior
Washington, D.C. 20240

D. ***Museums for a New Century.*** A Report of the Commission on Museums for a New Century, 1984.

Available from:

The American Association of Museums
1055 Thomas Jefferson Street, N.W.
Washington, D.C. 20007

Appendix F: Permit Guidelines: Research & Education

Guidelines for Submitting Applications for National Marine Sanctuary Research and Education Permits

A. INTRODUCTION

National Marine Sanctuaries are recognized as resource areas of national significance. Their distinctive characteristics have established them as environmental and historic resources for scientific research and public education. With yearly increases in the number of requests to conduct research and education in National Marine Sanctuaries, guidelines for managing and monitoring such projects are necessary to ensure compatibility with sanctuary goals and objectives and all other sanctuary activities.

The guidelines presented below describe the sanctuary permitting process. Applicants seeking financial support for research should consult the sanctuary contacts listed in this document.

Permits may be issued by the National Marine Sanctuary managers under special circumstances for activities otherwise prohibited by sanctuary regulations when related to: research to enhance scientific understanding of the sanctuary environment or to improve management decision-making; or education to further public awareness, understanding, and to establish access, use, and/or understanding of sanctuary resources and wise use of the sanctuary environment.

Anyone conducting prohibited activities without a valid National Marine Sanctuary permit may be subject to the penalties as provided under Section 303 of the Marine Protection, Research, and Sanctuaries Act of 1972 (as amended). A civil penalty of up to $50,000 for each violation of any regulation may be levied.

B. APPLICATION CONTENTS

1. Cover Sheet or Letter: The cover sheet or letter shall identify the following, if applicable: 1) name of the national marine sanctuary in which the proposed activity will take place; 2) title of the project; 3) name, address, telephone number, and affiliation of the applicant; 4) name, address, telephone number, and affiliation of and relationship of any colleagues covered by the permit; 5) project duration; 6) funding source; and 7) signature of the applicant.

2. Project Summary or Abstract: A 250-word (maximum) summary shall include a brief statement of objectives, methods to be used, and why it is preferable that the activity occur within the boundaries of the sanctuary. For research permits, this summary shall specify research objectives, scientific methods to be used, and significance of the proposed work to a particular sanctuary or to the national marine sanctuary system. The summary shall be suitable for use in the public press. For education permits, the summary must detail the objectives of the project and the methods to be used.

NOTE: If the work to be conducted is part of a research grant, submission of the grant itself will be sufficient provided it addresses all the points of this section.

3. Technical Information: This includes clear, concise, and complete statements in the following categories:

a. Objectives. State the objectives of the project.

b. Hypothesis to be Tested. If applicable, state the hypothesis to be tested.

c. Project Significance. Discuss significant previous work in the area of interest, if any, and how the proposed effort would enhance or contribute to improving the state of knowledge, use of the sanctuary or overall objectives of the Sanctuary Management Plan. Explain why the project should be performed in the sanctuary and the potential benefits to the sanctuary. For education permits, explain the educational value of the project.

d. Methods. Describe the tasks required to accomplish the project's objectives. For research permits, provide an adequate description of field and laboratory methods and procedures. Describe the rationale for selecting the proposed methods over any alternative methods. If collecting is required, indicate the type, quantity and frequency and how the specimens will be handled. If reference collections are made, indicate where specimens will be deposited upon completion of the project. Indicate what organisms might be collected incidental to those specifically sought and, if known, identify specialists who might be interested in incidental groups. Indicate where the laboratory analyses will be conducted, if applicable. Also state the statistical methods to be employed and the level of significance to be tested. For education permits, specify the methods to be used in the project. For all permits, specify the exact location of work within the Sanctuary and provide a map showing the proposed study or project location(s) and a description of the habitat area of particular concern.

e. Personnel. Identify the individuals involved in the project and specific tasks assigned to team members. Provide qualifications and evidence of ability to perform tasks. Only those persons listed or referred to on the permit are allowed to participate in permitted activities.

f. References. Cite only those used in the text of the proposal.

4. Environmental Consequences

Discuss the environmental consequences of conducting an otherwise prohibited activity and indicate whether the activity could be conducted outside the Sanctuary and accomplish the project's objectives. Specify the consequences and explain how the benefits of the research will outweigh the disadvantages or environmental consequences (short and long term).

5. Treatment of Results

For research permits, describe the nature and extent of anticipated results. Indicate how the results will be treated (e.g. published in a reference journal, incorporated into academic curriculum, used in management decision-making, published in the public press). For education permits, explain the educational value of the project and how and what products will be used or made available in the future. All information resulting from activities conducted under a National Marine Sanctuary permit must be made available to the public.

6. Supporting Information

a. Financial Support. Provide contract number, performance period, and name of sponsoring agency, if applicable. At a minimum, indicate source of financial support.

b. Coordination with Research in Progress or Proposed. SRD encourages research coordination and cost-sharing with other investigators to enhance scientific capabilities and avoid unnecessary duplication of effort. Applicants should include a description of these efforts, where applicable. Cite similar or supporting, past or present research results.

c. Copies of Other Permits. Applicant must include, if applicable, copies of other Federal, state and/or local permits issued with regards to this permit request. For example, EPA, US Army Corps of Engineers, etc.

d. Other SRD Permits. Applicant should include a listing of all their previous SRD permits.

C. REQUESTS FOR SANCTUARY SUPPORT SERVICES

SRD has limited on-site sanctuary personnel, facilities and equipment that may be used to support research under special circumstances. Requests for support should accompany the permit application and include the following information: 1) type of support requested; 2) justification; 3) dates and length of use; and 4) alternative plans if support is not available.

D. AMENDMENTS TO ACTIVE PERMITS

Requests for amendments to active permits (e.g. change in study design or other form of amendment) must conform to these guidelines. Persons desiring to continue research activities in the sanctuary must reapply for an extension of his/her current permit *before* it expires. Reference to the original application may be given in lieu of a new application, provided the scope of work does not change significantly and all cruise logs and project summaries pertinent to the original permit have been submitted to and approved by SRD.

E. SUBMISSION OF PERMIT REQUESTS

Four (4) copies of requests for permits must be submitted at least thirty (30) days in advance of the requested effective date to allow sufficient time for evaluation and processing. Sensitive or complicated requests, or requests for sanctuary support should be submitted ninety (90) days in advance. If additional time is required for review, the applicant will be notified within twenty (20) days of the receipt of the request.
Requests for permits must be addressed to the manager of the sanctuary in which the activities are to be conducted. A listing of their addresses and phone numbers can be found in Section I.

F. EVALUATION OF PERMIT REQUESTS

Permit applications are reviewed for completeness and adherence to these guidelines. Applicants will be contacted for clarification if applications are incomplete. Complete applications are assigned tracking numbers, are reviewed by SRD program officials, on-site sanctuary personnel, and, where necessary, peer-reviewed by outside experts. Applications are judged on the basis of: 1) relevance or importance to the sanctuary; 2) scientific or educational merits; 3) appropriateness

and environmental consequences of the technical approach; and 4) whether the proposed effort is more appropriately conducted outside the sanctuary.

G. CONDITIONS OF PERMITS

Based on the reviews of the permit application, SRD will approve or deny the permit. If denied, applicants are notified of the reason(s) for denial and informed of the appeal process. If approved, the Sanctuary Manager will issue the permit.

Permit holders must counter-sign the permit and return copies to SRD and on-site sanctuary personnel prior to conducting the permitted activities. Copies must be signed and returned within 10 days of receipt by the permit holder. If not returned within 30 days, the permit will automatically be canceled. A NOAA/SRD research flag will be issued by sanctuary managers to research permit holders for use while conducting the permitted activity. This requirement not only assures that sanctuary enforcement personnel are aware of permitted activities, but also alerts other sanctuary users that research activities are in progress.
The research flag must be returned to the sanctuary office upon completion of the research and no later than thirty (30) days after the permit expiration date.

Permits must be carried aboard research vessels and made available on request for inspection by sanctuary personnel. For underwater diving activities, it is recommended that a copy of the permit be laminated and available for display.

Only the persons specifically named on the permit may participate in permitted activities. Permits and research flags are non-transferrable. Permit holders must abide by all provisions set forth in the permit as well as applicable sanctuary regulations. Project summaries and technical information are incorporated into the conditions of the permit. Permitted activities must be conducted with adequate safeguards for the environment. To the extent possible, the environment shall be returned to the conditions which existed prior to the permitted activity.

Two important conditions of any permit are that the permit holder submit a project report and cruise log to the appropriate sanctuary office within 30 days of the permit's expiration date. The project report is a brief (1-2) page statement summarizing the results of permitted activities. A cruise log should list the days spent in the sanctuary as well as activities pursued, approximate positions, and general observations. Project reports are used in the sanctuary interpretive programs and cruise reports are used in the assessment of sanctuary activities.

The sanctuary manager may immediately amend, suspend, or revoke a permit granted pursuant to these guidelines and sanctuary regulations, in whole or in part, temporarily or indefinitely, if in his/her view the permit holder(s) acted in violation of the terms of the permit or of applicable sanctuary regulations, or for any good cause shown. Formal notice of such action shall be subsequently communicated in writing to the permit holder and shall set forth the reason for the action taken. The permit holder in relation to whom the action is taken may appeal the action as provided for in the sanctuary regulations.

H. MONITORING PERFORMANCE

Permitted activities will be monitored to ensure compliance with the conditions of the permit. SRD and on-site sanctuary personnel may periodically assess work in progress by visiting the

study location and observing any permitted activity or by reviewing any required reports. The discovery of any irregularities in conformance to the permit shall be promptly reported and appropriate action shall be taken. Permitted activities will be evaluated and the findings will be used to evaluate future applications.

I. FURTHER INFORMATION

For further information on the National Marine Sanctuary Program, write or call the Sanctuaries and Reserves Division or the on-site sanctuary contacts listed below:

Sanctuaries & Reserves Div. Headquarters

Research Coordinator or Education Coordinator
NOAA/Sanctuaries and Reserves Division
1825 Connecticut Ave., NW, Ste. 714
Washington, DC 20235
(202) 606-4126

Channel Islands National Marine Sanctuary

LCDR Steve Jameson, Manager
NOAA/Channel Islands National Marine Sanctuary
735 State St.
Santa Barbara, CA 93101
(805) 966-7107

Cordell Bank National Marine Sanctuary

Ed Ueber, Manager
NOAA/Cordell Bank National Marine Sanctuary
Fort Mason, Bldg. #201
San Francisco, CA 94123
(415) 556-3509

Fagatele Bay National Marine Sanctuary

Nancy Daschbach, Manager
NOAA/Fagatele Bay National Marine Sanctuary
P.O. Box 4318
Pago Pago, American Samoa 96799
(684) 633-5155

Florida Keys National Marine Sanctuary

Billy Causey, Designation Manager
NOAA/Florida Keys National Marine Sanctuary
9499 Overseas Hwy.
Marathon, FL 33050
(305) 743-2437

Flower Garden Banks National Marine Sanctuary

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NOAA/Key Largo National Marine Sanctuary
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Looe Key National Marine Sanctuary

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NOAA/Looe Key National Marine Sanctuary
c/o Bahia Honda State Recreation Area
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Big Pine Key, FL 33043
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